UNDERGRADUATE
PROSPECTUS
2023

UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA

Disclaimer

This prospectus is informational and should not be taken as binding on the University. Each aspect of the educational setup, from the admission procedure or criteria to the examination regulations or discipline, requires continuing review by the competent authorities. The university therefore reserves the right to change any rules and regulations applicable to students whenever it is deemed appropriate or necessary.

Vision

To be a quality conscious institution of international standing imparting knowledge in the field of engineering and applied technologies in a caring environment for the socioeconomic development of the country.

Mission

To fulfill the needs of the country by producing responsible graduates equipped with sound knowledge and skills along with highest moral values through conducive learning environment.

Core Values

i. Merit
ii. Honesty
iii. Justice
iv. Fair Play
v. Teamwork
vi. Transparency
vii. Accountability
viii. Implementation of Rule of Law

IN THE NAME OF ALLAH, THE BENEFICENT, THE MERCIFUL

ORGANIZATIONAL SETUP

Chancellor
Muhammad Baligh-ur-Rehman
(Governor of the Punjab)

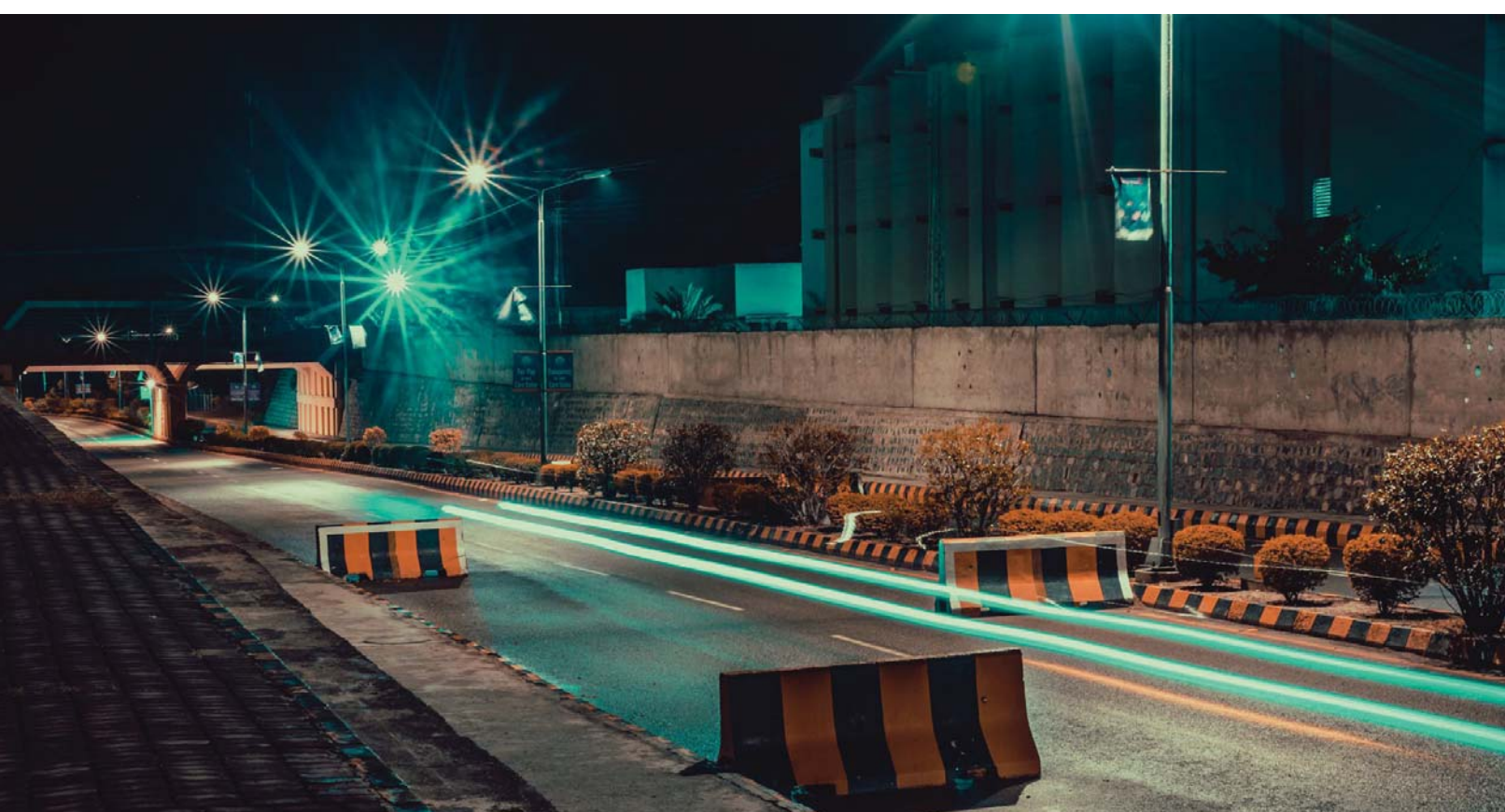
Vice Chancellor
Prof. Dr. Qaiser uz Zaman Khan

Pro-Vice Chancellor
Prof. Dr. Qaiser uz Zaman Khan

Registrar
Khalid Mahmood

Treasurer
Muhammad Nawaz

Controller of Examination
Dr. Shaikh Saaqib Haroon



Chancellor

Muhammad Baligh-ur-Rehman

(Governor of the Punjab)

Vice Chancellor's Message

Dear Prospective Students,

As the Vice Chancellor of this esteemed university, I extend a warm welcome to you all. I am honored to have the opportunity to share my thoughts with you in the preface of our university prospectus for the undergraduate degree program.

First and foremost, I would like to emphasize the importance of hard work and dedication in achieving success. As you embark on this journey towards gaining knowledge and becoming a competent engineer, it is essential to remember that success comes through perseverance and hard work. Therefore, I encourage you to put in your best efforts to excel in your studies.

At our university, we place great importance on practical learning and problem-solving skills. We believe that it is not enough to simply acquire theoretical knowledge; one must also be able to apply that knowledge to real-world challenges. As future engineers, it is your responsibility to contribute to the development of our society by solving the challenges facing Pakistan and the world.

Furthermore, I would like to emphasize that becoming a good human being is just as important as becoming a competent engineer. The values of integrity, honesty, empathy, and compassion are just as crucial in shaping your character as your technical skills. We want our graduates to be well-rounded individuals who not only excel in their professional careers but also contribute positively to their communities.

I am proud to announce that our university has been ranked among the top 600-801 universities in the world, according to the 2023 World Times University Ranking. This achievement is a testament to the hard work and dedication of our graduates, who have excelled in their professional lives while serving around the globe.

In last, I urge you to make the most of the opportunities available to you at our university. We have some of the most talented faculty members and state-of-the-art facilities that will enable you to realize your full potential. I hope that you will take advantage of these resources and work hard to achieve your goals.

Thank you for choosing our university for your academic pursuits, and I wish you all the best for a successful and fulfilling journey ahead.

Prof. Dr. Qaiser uz Zaman Khan

CONTENTS

Admission Procedures

ABOUT THE UNIVERSITY

Introduction

The antique name 'Takshasila' means the city of cut stones. Taxila has gained worldwide eminence for its archaeological sites. Once a province of the powerful Achaemenian empire, Taxila was conquered by Alexander in 327 BC. It later came under the Mauryan dynasty and attained a remarkably mature level of development under the great Ashoka. Then appeared the Indo- Greek descendants of Alexander's warriors and finally came the most creative period of Gandhara. The great Kushan dynasty was established somewhere near 50 AD. During the next 200 years Taxila became a renowned center of learning, philosophy, art and religion, Jaulian being a center of excellence or a university of that age. Pilgrims and travelers were attracted to it from as far away as China and Greece. History took a new turn around 1950 when Ordnance Factories were founded at Wah, adjacent to Taxila. The country's largest Mechanical Complex and Foundry were established at Taxila in mid-sixties. In early seventies, the industrial progress attained a new dimension when Taxila was chosen to have Heavy Industries Taxila near its world-famous museum. At the same time Pakistan's largest Aeronautical Complex was established at Kamra which is about 45 km from Taxila. In mid-seventies, government of the Punjab found the city ideally suitable for establishing the constituent college of University of Engineering and Technology, Lahore. Industrial progress in and around Taxila is gaining a newer pace. The neighboring industrial organizations are in the process of rapid expansion. A new industrial zone has emerged in Hattar area, which is about 20 km away from Taxila. Taxila is emerging as a leading industrial region at the national level. The strategic location is paving way for the city to act as a gateway to historical "Silk Route".

The University

With phenomenal increase in students' enrollment in 1970's, a plan to establish additional campuses of the University of Engineering and Technology Lahore was conceived. As a result of that, the University College of Engineering Taxila was established in 1975. For three years it functioned at Sahiwal. In 1978, it was shifted to its permanent location at Taxila. The College

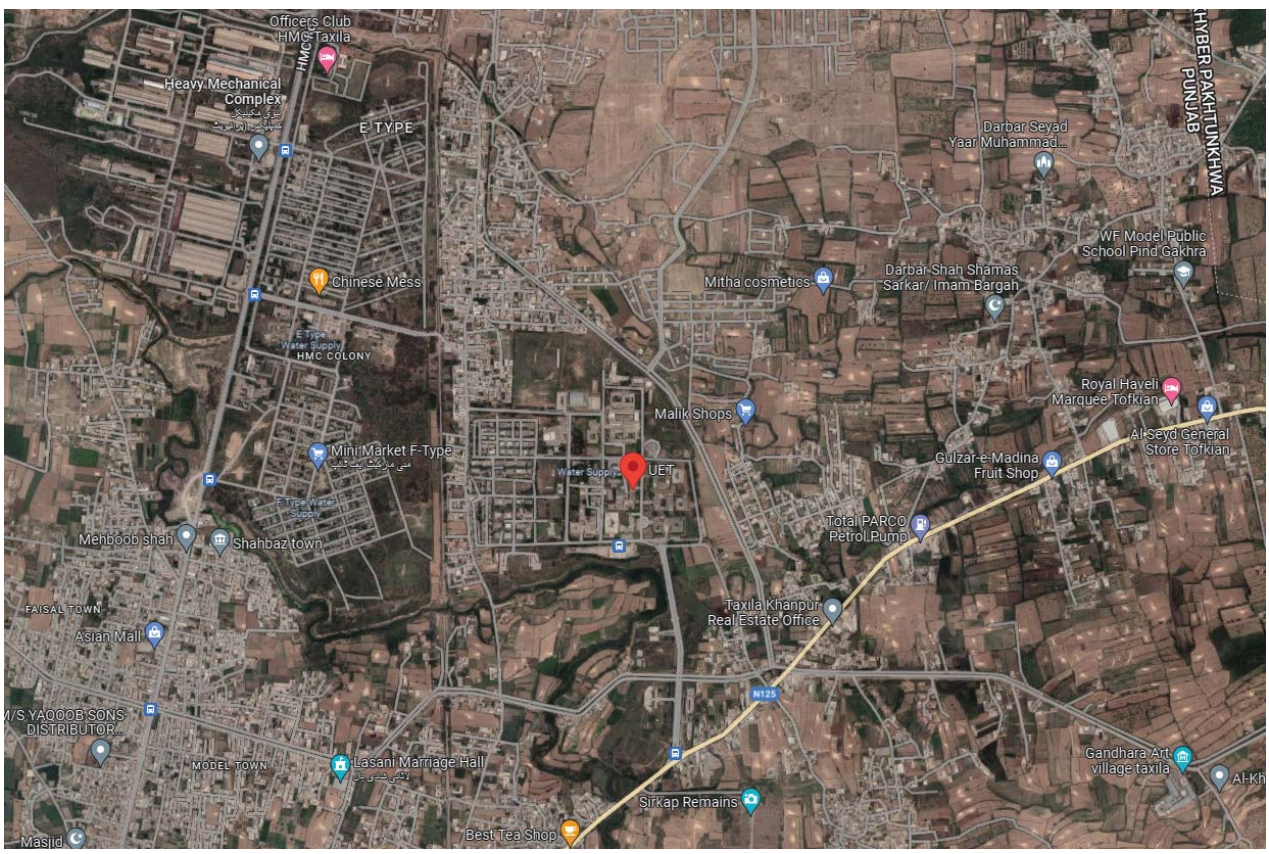
continued its working under the administrative control of the University of Engineering and Technology, Lahore till October 1993.
During this month it received its charter as an independent university under the University of Engineering and Technology Taxila Ordinance 1993. At present total enrollment of undergraduate and postgraduate students is above 5500.

Administration

The Governor of Punjab is the Chancellor and the Minister of Higher Education of Punjab is the Pro-Chancellor of the University. The Syndicate is the governing/legislative body and the Academic Council is the highest academic body of the University. The Vice-Chancellor is the Chief Executive and Academic Officer of the University. He is assisted by Deans of Faculties, Chairmen of Departments, Directors and Principal Officers of the University – the Registrar, the Treasurer, the Controller of Examinations and the Project Director, to ensure that the provisions of the University Act, the Statutes and the Regulations are faithfully observed and implemented.

Location

The University campus is located on the outskirts of Taxila at a distance of 5 km from the city. It is situated near railway station Mohra Shahwali Shah on Taxila-Havelian branch line. The city of Taxila is 35 km from the twin cities of Islamabad and Rawalpindi on the main Rawalpindi-Peshawar highway. The University buses commute daily between the campus and the cities of Islamabad, Rawalpindi and Wah Cantt. The campus covers an area of 163 acres. All the teaching departments, residential colony for teachers/ employees, student hostels, guest house, post office and bank are housed on campus.



International University Rankings

By the infinite grace of Allah Almighty, the University of Engineering and Technology, Taxila, has secured its maiden position in several prestigious global academic rankings publicized by Times Higher Education® (THE) for the year 2023. Among global institutions, UET Taxila earned a place in the top 601 to 800 in THE® World University Rankings for the year 2023, distinguishing itself as the top-ranked university in Pakistan for Engineering and Technology.

In the THE® Asia University Rankings 2023, UET Taxila climbed to the 142nd spot, asserting its preeminent position among engineering and technology universities within Pakistan. This achievement highlights its growing prominence within the dynamic Asian academic landscape.

UET Taxila also demonstrated exceptional growth among young institutions, securing a position in the top 151 to 200 in THE® Young University Rankings 2023, an accolade reserved for universities aged 50 or below, showcasing its potential for transformative innovation and impact.

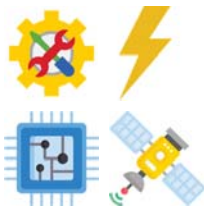
In the THE® subject-specific rankings, UET Taxila featured among the top 500 universities globally for Engineering. Additionally, the institution secured a place in the top 400 universities for natural sciences and computer science, further consolidating its academic strengths.

The University of Engineering and Technology, Taxila, has made notable strides in the UI GreenMetric World University Rankings. In 2021, the university was placed 735th globally, showcasing its commitment to sustainable practices. Further reinforcing this trajectory, the institution improved its standing in 2022, securing the 695th position worldwide.

This rise in ranking indicates the continuous and determined efforts by the university towards environmental conservation and sustainability. The upward movement underscores the institution's growing global stature and underlines its commitment to maintaining world-class standards in eco-friendly, sustainable operations. These achievements reflect UET Taxila's commitment to cultivating excellence across a diverse array of engineering, computer science and natural science disciplines, and underscore its rising influence in the global academic sphere – all praise be to Allah Almighty.

UNIVERSITY RANKING
BY SUBJECT

THE WORLD UNIVERSITY RANKINGS
SUBJECT 2023



401-500

ENGINEERING

301-400

NATURAL SCIENCE

301-400

COMPUTER SCIENCE

UNIVERSITY RANKING
IN ASIA

THE WORLD UNIVERSITY RANKINGS
ASIA 2023

142

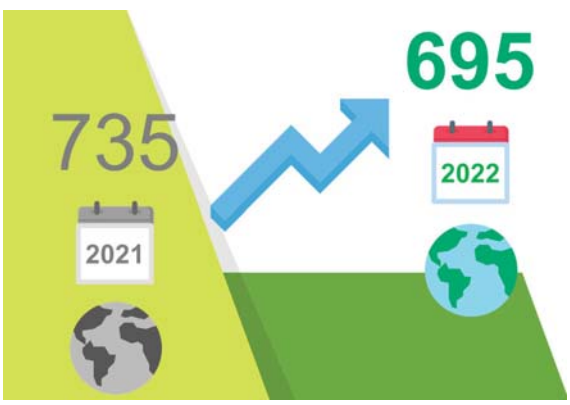
UNIVERSITY RANKING
YOUNG VARSITIES

THE WORLD UNIVERSITY RANKINGS
YOUNG 2023

151-200

UNIVERSITY RANKING
SUSTAINABILITY

UI GreenMetric World University Ranking



ACADEMIC AND ADMINISTRATIVE DEPARTMENTS

Academic Departments

Chairmen

Department of Civil Engineering:
Prof. Dr. Qaiser uz Zaman Khan

Department of Environmental Engineering:
Prof. Dr. Faisal Shabbir

Department of Electrical Engineering:
Prof. Dr. Muhammad Iram Baig

Department of Electronics Engineering:
Prof. Dr. Yaseer Arafat Durrani

Department of Mechanical Engineering:
Prof. Dr. Riffat Asim Pasha

Department of Computer Engineering:
Prof. Dr. Hafiz Adnan Habib

Department of Software Engineering:
Prof. Dr. Tabassam Nawaz

Department of Telecommunication Engineering:
Prof. Dr. Yasar Amin

Department of Computer Science:
Dr. Syed Aun Irtaza

Department of Industrial & Manufacturing Engineering:
Prof. Dr. Mirza Jahanzaib

Department of Basic Sciences & Humanities:
Dr. Muhammad Mudassar

Establishment

Additional Registrar

Establishment:
Mr. Khalid Mehmood

Deputy Registrars

A & R:
Mr. Ahmad Noor

Transport:
Mr. Basharat Shah

Affiliation:
Mr. Khalid Mehmood

Procurement:
Mr. Asif Ali

Assistant Registrars

Establishment:
Mr. Ehsan Ahmad
Mr. Farhat Iqbal Malik

Procurement:
Mr. Usama Khalid

Vice-Chancellor's Office

Secretary to VC:

Deputy Registrar

Syed Basharat Abbas Shah

Legal Cell

Legal Advisor:
Adv. Mr. Farhat Abbas Ch.

Accounts Branch

Additional Treasurer

Mr. Muhammad Nawaz

Dues & Financial Aid Services:
Mr. Muhammad Farooq

Deputy Treasurers

Accounts:
Mr. Shahid Saleem

Audit Cell:
Mr. Abid Mehmood Qureshi

Resident Auditor

Mr. Khalid Mehmood Qureshi

Examination Branch

Deputy Controller

Dr. Zakaullah

Assistant Controller

Mr. Hassan Ahmad Khan

Building and Works

Project Director

Engr. Muhammad Tahir Ali

Executive Engineer
Engr. Nasreen Ali

Assistant Engineers
Engr. Muhammad Tauseef
Engr. Farsan Ali Qureshi
Engr. Hafiz Aubaid Asad

Estate Office
Resident Officer:
Mr. Ghulam Abbas Hussain

Health Clinic
SMO (Male)
Dr. M. Arif Nadeem

SMO (Female)
Dr. Sabahat Quddus

Dental Surgeon
Dr. Uzma Masood

Library
Senior Librarians
Mr. Malik Muhammad Safdar
Dr. Muhammad Bashir

Network Administration & Research Center (NARC)
Director
Mr. Khuram Mahmood

Network Administrators
Mr. Muhammad Iqbal
Mr. Amjad Ismail

Web Manager
Engr. Ulfat Hussain

Manager Software Development
Mr. Huzaifa

Technical Journal
Chief Editor:
Prof. Dr. Hafiz Adnan Habib
Editor:
Mr. Asif Ali

Security Directorate
Director Admin & Security:
Mr. Muhammad Akmal Hussain

Security Officer:
Mr. Ghulam Abbas Hussain

Directors
Student Affairs:
Prof. Dr. Yasar Amin
Academics:
Prof. Dr. Riffat Asim Pasha
Sports:
Mr. Muhammad Akmal Hussain
Staff Development:
Dr. Muzaffar Ali
Digital Library:
Dr. Muhammad Bashir
ORIC:
Prof. Dr. Muhammad Haroon Yousaf
Telephone Exchange:
Dr. Abdul Basit
Quality Enhancement Cell:
Dr. Humayun Shahid
Planning & Development:
Prof. Dr. Naveed Ahmad
Advance Studies Research & Technological Development:
Prof. Dr. Muhammad Yaqub

Deputy Director
P&D:
Mrs. Amna Arshad
QEC:
Mr. Faisal Shahzad

Assistant Directors
Placement:
Mr. Tauqeer Ahmed

Chairmen/Conveners of Committees
Discipline:
Prof. Dr. Tahir Mahmood

Library:
Prof. Dr. Shabbir Majeed Ch.

Sports:
Prof. Dr. Adnan Habib

Transport:
Prof. Dr. Ayub Elahi

Masjid:
Prof. Dr. Tabassam Nawaz

Health:
Prof. Dr. Riffat Asim Pasha

Admission:
Prof. Dr. Muhammad Iram Baig
Affiliation:
Prof. Dr. Mirza Jahanzaib
Central Purchase:
Prof. Dr. Yasar Amin
Shops/Cafeteria/Messes:
Prof. Dr. Faisal Shabbir

Hostel Administration

Senior Warden
Prof. Dr. Hafiz Adnan Habib

Warden (Male)
Prof. Dr. Muhammad Obaidullah
Engr. Muhammad Asjad Saleem Raja

Warden (Female)
Ms. Mariam Batool (Ayesha-Hall)

Resident Tutors
Quaid-e-Azam (Q) Hall:
Engr. Obaid Asad
Iqbal (I) Hall:
Engr. Hafiz Muhammad Habib
Umar Hall & Usman Hall:
Engr. Muhammad Tausif
Ali Hall:
Engr. Hammad Haider
Abu Bakar (AB) Hall:
Engr. Sullah ud Din
Jabir Bin Hayan (JBH) Hall:
Engr. Muhammad Usman Rashid

Incharge Foreign Faculty Hostel:
Prof. Dr. Hafiz Adnan Habib

Incharge Day Care Center:
Dr. Syeda Iffat Naqvi

IMPORTANT TELEPHONE NUMBERS

The Intercom extensions (ddd) are configured as Rawalpindi/Islamabad local numbers with prefix 051-9047 ddd, Fax No: 051-9047420

Description	Intercom Ext. (ddd)	Description	Intercom Ext. (ddd)
Vice-Chancellor	401	Dy. Treasurer (Audit)	425
Secretary to the Vice-Chancellor	403, 404	Accounts Branch	417
Deans of Faculties		Dues and Financial Aid Services	421, 422
Electronics & Electrical Engineering	533	Resident Auditor	423
Civil & Environmental Engineering	633	Controller of Examinations	428
Mechanical & Aeronautical Engineering	666	Examination Branch	432, 433
Telecom. & Information Engineering	566	Project Director (Building & Works)	434
Industrial Engineering	825	Director QEC	492
Chairmen of Academic Departments		Deputy Director QEC	493
Electrical Engineering	535	Director Physical Education	473
Electronics Engineering	720	Director P&D	442
Civil Engineering	635	Deputy Director Placement	444
Environmental Engineering	795	Legal Advisor	445
Mechanical Engineering	668	Library	455
Computer Engineering	568	Health Clinic	461
Software Engineering	735	Network Centre	468
Telecommunication Engineering	918	Transport Office	470
Computer Science	845	Directorate of Students Affairs	472
Industrial & Manufacturing Engineering	827	Post Office	474
Basic Sciences and Humanities	870	Habib Bank Ltd.	475
Other Establishments		Senior Warden	568
Registrar	405	Quaid-e-Azam Hall	264, 269
Additional Registrar (Establishment)	407	Iqbal Hall	266, 271
Assistant Registrar (Establishment)	408	Ali Hall	267, 272
Establishment Branch	409	Abubakar Hall	265, 270
Additional Reg. Academic & Regulation	410	Usman Hall	273, 277
Academic & Regulation Branch	411	Bilal Hall	275, 276
Admissions Office (Undergraduate)	412, 427	Ayesha Hall	268, 274
Treasurer	413	Telephone Exchange (Operator)	400, 500
Dy. Treasurer (Accounts)	418	Security Control Room	803

PROFILE OF UNIVERSITY FACULTIES

1 Faculty of Civil and Environmental Engineering

This faculty consists of two degree awarding departments:

- Department of Civil Engineering
- Department of Environmental Engineering

DEPARTMENT OF CIVIL ENGINEERING

Chairman

Prof. Dr. Qaiser uz Zaman Khan

Professors

Dr. Qaiser uz Zaman Khan
BSc Eng. (Hons., Gold Medalist, UET, Lahore)
MSc Eng. (University of Leeds, UK)
PhD (Saitama University, Japan)

Dr. Muhammad Yaqub
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Uni. of Manchester, UK)

Dr. Ayub Elahi
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Taxila & Queen's Univ., UK)
Post Doc. (Queen's Univ. of Belfast, UK)

Dr. Imran Hafeez
BSc Eng. (UET, Lahore)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)
Post Doc. (USA)

Dr. Usman Ghani
BSc Eng. (Hons., Gold Medalist, UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila & Queen Mery Univ., UK)
Post Doc (Univ. of Birmingham, UK)

Dr. Naeem Ejaz
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Lahore)
PhD (UET, Taxila)

Dr. Naveed Ahmad
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Univ. of Nottingham, UK)
Post Doc. (Univ. of Nottingham, UK)

Dr. Faisal Shabbir
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (The Univ. of Auckland, NZ)

Dr. Muhammad Fiaz Tahir
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Lahore)
PhD (UET, Taxila)
Post Doc. (UK)

Associate Professors

Dr. Usman Ali Naeem
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Jawad Hussain
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Univ. of Auckland, NZ)

Dr. Afaq Ahmad
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Heriot-watt University UK)
(On Higher Studies Abroad)

Dr. Syed Bilal Ahmed Zaidi
BSc Eng.(Hons., UET, Taxila)
MSc Eng.(UET, Taxila)
PhD (Uni. of Nottingham,UK)

Assistant Professors

Engr. Muhammad Salman
BSc Eng. (UET, Taxila)
MSc Eng. (NUST)

Dr. Faheem Butt
BSc Eng. (UET, Lahore)
MSc Eng. (UET, Taxila)
PhD (Univ. of Auckland, NZ)

Dr. Shahzad Saleem
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Thammasat Univ., Thailand)

Dr. Muhammad Usman Arshid
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Naveed Ahmad
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Tokyo University, Japan)

Dr. Saqib Mehboob
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Muhammad Saad
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Dr. Irshad Qureshi
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
M. Eng. (AIT, Thailand)
PhD (AIT, Thailand)
Post Doc. (USA)

Dr. Ghufran Ahmad Pasha
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Saitama University, Japan)

Lecturers

Dr. Afzal Ahmed
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Muhammad Rameez Sohail
BSc Eng. (MP Risalpur)
MSc Eng. (NUST, Islamabad)

Engr. Zulfiqar Ali
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
(On higher studies abroad)

Engr. Kashif Riaz
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Dr. Rana Muhammad Waqas
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Jamal Ahmed Khan
BSc Eng. (CECOS, Peshawar)
MSc Eng. (NUST, Islamabad)
PhD (NUST, Islamabad)

Engr. Hammad Raza
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Ali Raza
BSc Eng. (BZU, Multan)
MSc Eng. (UET,Taxila)

Engr. Usman Rashid
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Mujahid Iqbal
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Muhammad Arshad
BSc Eng. (NUST, Islamabad)
MSc Eng. (NUST, Islamabad)

Engr. Abdul Qadeer
BSc Eng. (UET, Taxila)
MSc Eng. (NUST, Islamabad)

Lab Engineers

Engr. Hammad Haider
BSc Eng. (UET, Lahore)
MSc Eng. (UET, Taxila)

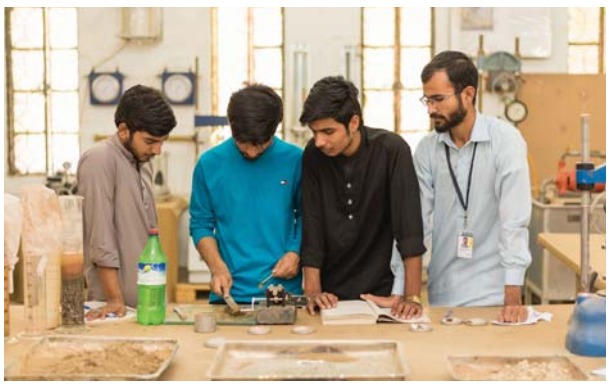
The Department

Department of Civil Engineering is actively engaged in disseminating civil engineering education for the last forty years. The Department has produced several eminent engineers who have made significant contributions in the planning and execution of Civil Engineering projects in Pakistan as well as abroad. The Department of Civil Engineering has an approved faculty strength of 52 (including lab engineers), nearly 50% of whom contribute to postgraduate teaching and are involved in PhD research work. Approximately 641 undergraduate and 238 postgraduate students are registered in the department. Civil engineers cater to the national needs for buildings, highways, dams, bridges, irrigation network & water supply systems, and are the world's largest users of building materials.

Outcome Based Education (OBE)

The department felt the need for adoption of outcome based education (OBE) system as it is significant both for the graduating engineers and the university. Consequently, it was planned to adopt OBE system during 2014, hence after, courses were reviewed through statutory bodies and trainings for faculty members were arranged.

Further, the student awareness seminars on OBE systems were also conducted. The department completely switched over to OBE in Fall-2017. Implementing this system will enable the program to impart an education compatible to the international standards and to enable students to compete in international market.



It is also worth mentioning that the PEC has already granted accreditation upto 2018 session after fulfillment of all requirements by the department on OBE system.

Program Educational Objectives (PEOs)

BSc Civil Engineering graduates will demonstrate the;

PEO-1: Sound technical knowledge and skills towards Civil Engineering profession.

PEO-2: Planning, design, and management of civil engineering projects through professional growth and development activities.

PEO-3: Effective communication skills and teamwork to contribute in multi-disciplinary projects.

PEO-4: Zeal for continuous learning and societal services in context of social, environmental, and ethical aspects.

Courses of Study

The Department offers full-time course of four years duration leading to the Bachelors' Degree in Civil Engineering. The department also offers graduate courses of study leading to MSc and PhD degrees in Civil Engineering.

In the bachelor's course, emphasis is laid on the fundamental concepts and principles, which inbuilt the basis of civil engineering practice. To foster their creative abilities, the students are assigned projects on design, construction, or laboratory investigation for self-directed execution. The classroom and laboratory work are supplemented by the instructional tours to acquaint students with civil engineering projects of national importance. Survey camp is held to impart intensive field training, where the students plan and execute survey of large areas, independently.

Laboratories

The department has the following well-equipped laboratories to meet the academic requirements of students and teachers as well as the professional needs of the government and private organizations:

1. Soil Mechanics
2. Concrete Technology
3. Strength of Materials
4. Transportation Engineering
5. Hydraulics and Irrigation Engineering
6. Structural Engineering
7. Surveying Lab
8. Environmental Analytical Techniques
9. CAD Lab
10. Postgraduate Research Laboratory

Department upgrades the laboratories from time to time through the funds provided by the Higher Education Commission (HEC) and its own resources. Hydraulics/Fluid Mechanics Laboratory is working in new building and installed with latest research equipment.

Department is also equipped with Postgraduate Research Laboratory which has latest ample units of computers along with civil engineering software and research tools.

Taxila Institute of Transportation Engineering (TITE)

Department of Civil Engineering has established a new institute by the name of "Taxila Institute of Transportation Engineering (TITE)". It is a unique institute of its own kind in Pakistan and has proved to be a focal point for providing education and research facilities in the field of Transportation Engineering.

The institute provides facilities like research laboratories, lecture rooms for postgraduate students, conference room, computer laboratory and a library. A wide range of state-of-the-art equipment had been procured to facilitate high tech research work. The mission of the institute is to develop and implement innovative methods, materials, and the technologies for improving transportation efficiency, safety and reliability as well as improving the learning and innovative environment for students, faculty, and staff in transportation related areas.

Postgraduate Studies & Research

To satisfy the increasing demand for relevant advanced technological education, the department offers MSc degree courses in Structural Engineering, Water Resources & Irrigation Engineering, Transportation Engineering, and Geo Tech Engineering covering the most recent developments. The courses contain a balance of analytical and professional aspects and are designed to suit the needs of fresh graduates and those with professional experience.

The faculty has completed several research projects funded by HEC through the Directorate of Advanced Studies, Research and Technological Development. Research papers addressing applied research have been published in journals and conferences of national and international repute.

Most of the postgraduate students belong to the construction industry and act as a bridge for university-industry linkage that makes research in the department to be practical and useful for the country. The introduction of PhD program has further enriched the research activities in the department. 49 students have been awarded PhD degrees in various fields. Presently about 80 PhD scholars are pursuing their PhD research work. Research is being carried out in the following areas:

a. Structural Engineering
b. Geo Technical Engineering
c. Transportation Engineering
d. Water Resources and Irrigation Engineering

Numerical modeling and computer-application in all the research activities are being given special attention. The courses of studies have been designed based on present needs of the Industry. The students are also trained to work independently for solving complex real-world problems.

Courses Under Semester System
BSc Civil Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-101	Engineering Drawing	1	2
NS-102	Engineering Mechanics	3	1
ES-103	Engineering Geology	2	0
CE-104	Surveying-I	2	1
MA-105	Calculus & Analytical Geometry	3	0
HU-112	Islamic Studies	2	0
	Total	13	4
	Semester Total	**17**	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-106	Surveying-II	2	2
CE-107	Engineering Materials	2	1
HU -108	Professional Ethics	2	0
MA-109	Differential Equations	3	0
HU-110	Pakistan Studies	2	0
HU-111	Professional English	2	0
	Total	**13**	**3**
	Semester Total	**16**	
	Total for First Year	**33**	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-201	Fluid Mechanics-I	2	1
CE-202	Properties of Concrete	2	1
CE-203	Engineering Practice	2	0
MA-204	Numerical Analysis and Computer Programming	3	1
MS-212	Hazards and Disaster Management	3	0
NS-214	Introduction to GIS and RS	2	0
	Total	**14**	**3**
	Semester Total	**17**	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-206	Theory of Structures-I	3	0
CE-207	Strength of Materials-I	3	1
CE-208	Soil Mechanics-I	2	1
CE-209	Drawing, Estimation & Construction	2	1
HU-211	Communication Skills & Technical Report Writing	2	0
MA-213	Probability and Statistics	3	0
	Total	**15**	**3**
	Semester Total	**18**	
	Total for Second Year	**35**	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-301	Theory of Structures-II	3	1
CE-302	Strength of Materials-II	3	1
CE-303	Soil Mechanics-II	3	1
MS-304	Construction Planning & Management	2	1
CE-305	Hydrology and Water Resources	2	1
	Total	**13**	**5**
	Semester Total	**18**	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-307	Reinforced Concrete-I	3	0
CE-308	Design of Steel Structures	3	0
CE-309	Fluid Mechanics-II	2	1
CE-310	Transportation Engineering-I	2	1
CE-311	Computer Applications	2	1
	Total	**12**	**3**
	Semester Total	**15**	
	Total for Third Year	**33**	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-401	Environmental Engineering-I	2	0
CE-402	Reinforced Concrete-II	3	1
CE-403	Hydraulics Engineering	2	1
CE-404	Transportation Engineering-II	2	1
CE-405	Foundation Engineering	2	1
CE-406(A)	Project	0	3
	Total	**11**	**7**
	Semester Total	**18**	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-407	Structural Engineering	3	0
CE-408	Irrigation Engineering	2	0
CE-409	Analysis and Design of structures	2	2
CE-410	Environment Engineering-II	2	1
MS-411	Entrepreneurship & Leadership	2	0
CE-406(B)	Project	0	3
	Total	11	6
	Semester Total	**17**	
	Total for Final Year	**35**	
	Grand Total for Four Years	**136**	

Note:
Theory and Lab courses are treated as separate courses.

DEPARTMENT OF ENVIRONMENTAL ENGINEERING

Chairman
Prof. Dr. Faisal Shabbir

Associate Professor

Dr. Sadia Nasreen
MSc (FJWU, Rwp)
M. Phil (CIIT, Abbotabad)
PhD (China University of Geo-sciences, Wuhan, China)

Lecturers

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BSc Eng. (UET, Lahore)
MSc Eng. (UET, Lahore)

Engr. Muhammad Zeeshan
BSc Eng. (UET, Lahore)
MSc Eng. (UET, Lahore)
(on higher studies abroad)

Engr. Babar Abbas
BSc Eng. (NUST, Islamabad)
MSc Eng. (NUST, Islamabad)

Dr. Abaid Ullah
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)
(Gold Medallist)
PhD (UET, Taxila)

Engr. Bilal Asif
BSc Eng. (UET, Taxila)
MS Eng. (NUST Islamabad)

Lab Engineers

Engr. Nayab Zahra
BSc Eng. (UET, Lahore)
MSc Eng. (UET, Lahore)

Engr. Muhammad Usman Saleem
BSc Eng. (UET, Taxila)
MS Eng. (NUST, Islamabad)

The Department

The Department of Environmental Engineering was established in 2010. The department is working under the faculty of Civil & Environmental Engineering. Considering the overall environmental crises and issues throughout the country, it has been decided to produce well trained professionals in the field of Environmental Engineering.

The graduates will be highly motivated and trained to undertake the environmental issues like water and wastewater treatment, air and noise pollution, river, and land pollution etc.

Outcome Based Education (OBE)

- Knowing the need of technical educational program and to exercise quality assessment of the offered program(s), the department has adopted outcome-based education (OBE) system since 2017.
- To implement OBE system effectively the faculty members and staff are trained. The importance of OBE System is also introduced to students through awareness seminars. Through implementation of this system, graduated students will be able to compete in International market by meeting its standards.
- Pakistan Engineering Council (PEC) has also granted accreditation to 2014, 2015, 2016, 2017 and 2018 sessions on OBE system.

Program Vision

To promote sustainable solutions by implementing the knowledge of engineering for environmental impact reduction.

Program Mission

To create, disseminate and integrate knowledge of environmental engineering for sustainable use and management of environmental resources.

Program Educational Objectives (PEOs)

PEO-1 Apply the acquired knowledge for design, operation and development of sustainable solutions related to environmental systems.

PEO-2 Exercise ethical, social and professional practices while making engineering-based decisions to communicate in cross-functional teams.

PEO-3 Pursue continual learning through knowledge acquisition, investigation, value addition and research for development.

Laboratories

The department has following state of the art laboratories equipped with advance instruments:

- Environmental Analytical Techniques
- Environmental Microbiology
- Water Treatment Technology
- Air & Noise Pollution Control
- Environmental Chemistry
- Advanced Analytical
- Waste Analysis Lab
- Computer Lab

Courses of Study

The Department of Environmental Engineering offers full time course of four years duration, leading to the bachelor's degree in Environmental Engineering. The courses are built on a strong foundation of mathematical, physical, computing sciences and civil engineering.

Emphasis is laid on the fundamental concepts and principles, which constitute the basis of environmental engineering practice. The curriculum is designed to cover a broad range of areas. The department offers a series of courses in the following areas:

- Health Safety and Environment
- Environmental Engineering Lab. Techniques
- Geo-Graphical information Systems
- Water Supply and Sewerage Network Design
- Environmental Management Systems
- Membrane Based Treatment Technologies

- Solid & Hazardous Waste Management
- Industrial Waste Management
- Environmental Laws and Policies
- Air & Noise Pollution Control
- Environmental Impact Assessment and Management
- Water & Wastewater Treatment and Design

The provided course contents are up to date and well arranged. The designed course contents will support the graduates to enhance their knowledge up to the international standards.

Future Plans

The Department will offer Master and Doctoral Programs in the field of Environmental Engineering in near future.

Courses Under Semester System
BSc Environmental Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-111	Introduction to Environmental Engineering	3	0
EN-112	Environmental Chemistry	2	1
BH-113	Engineering Calculus	3	0
CE-114	Engineering Drawing	1	2
CS-115	Fundamental of Computing and Programming	2	2
BH-116	Islamic Studies	2	0
	Total	**13**	**5**
	Semester Total	**18**	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-121	Engineering Mechanics	2	1
CE-122	Surveying and Leveling	2	2
BH-123	Introduction to Microbiology	3	0
BH-124	Linear Algebra and Differential Equations	3	0
BH-125	Communication Skills	2	0
EE-126	Electrical Technology	2	1
	Total	**14**	**4**
	Semester Total	**18**	
	Total for First Year	**36**	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-211	Environmental Microbiology	2	1
CE-212	Hydrology and Water Resource Management	3	0
CE-213	Soil Mechanics	2	1
BH-214	Environment and Human Interaction	2	0
BH-215	Numerical Analysis	3	0
BH-216	Pakistan Studies	2	0
	Total	**14**	**2**
	Semester Total	**16**	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-221	Environmental Engineering Lab. Techniques	1	2
EN-222	Environmental Laws and Policies	3	0
CE-223	Environmental Impact of Transportation Systems	2	1
MA-224	Thermodynamics	2	1
CE-225	Fluid Mechanics	2	1
CE-226	Introduction to Geographical Information System and Remote Sensing	2	1
	Total	**12**	**6**
	Semester Total	**18**	
	Total for Second Year	**34**	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-311	Water Treatment and Design	3	1
BH-312	Probability and Statistics	3	0
CE-313	Climate Change Adaptation and Mitigation	3	0
CE-314	Applied Geographical Information System and Remote Sensing	2	1
EN-315	Environmental Management System	3	0
BH-316	Engineering Economics	2	0
	Total	**16**	**2**
	Semester Total	**18**	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-321	Water Supply and Sewerage Network Design	2	2
CE-322	Project Planning and Management	2	0
EN-323	Environmental Impact Assessment and Management	3	0
EN-324	Solid and Hazardous Waste Management	3	0
EN-325	Air & Noise Pollution Control	3	1
BH-326	Technical Writing and Presentation Skills	2	0
	Total	**15**	**3**
	Semester Total	**18**	
	Total for Third Year	**36**	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-411	Environmental Modeling	3	0
EN-412	Wastewater Treatment and Design	3	1
EN-413	Environmental Health and Safety	3	0
EN-414	Contaminated Site Remediation	3	0
EN-415	Professional Ethics	2	0
EN-416	Final Year Project -I	0	3
	Total	**14**	**4**
	Semester Total	**18**	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-421	Industrial Waste Management	3	0
MS-422	Entrepreneurship	2	0
EN-423	Renewable Energy Resources	3	0
EN-424	Membrane Based Water and Waste Water Treatment	2	0
EN-425	Final Year Project -II	0	3
	Total	**10**	**3**
	Semester Total	**13**	
	Total for Final Year	**31**	
	Grand Total for Four Years	**137**	

Note:
Theory and Lab courses are treated as separate courses.

2 Faculty of Electronics and Electrical Engineering

This faculty consists of following two degree awarding departments:

- Department of Electrical Engineering
- Department of Electronics Engineering

DEPARTMENT OF ELECTRICAL ENGINEERING

Chairman

Prof. Dr. Muhammad Iram Baig

Professors

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BSc Eng. (UET, Lahore)
MSc Eng. (UET, Lahore)
PhD (UET, Taxila)

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Dr. Muhammad Obaidullah
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MSc Eng. (UET, Taxila)
PhD (Uni. of Manchester UK)

Dr. Salman Amin
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MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

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PhD (UET, Taxila)

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MSc Eng. (UET, Taxila)
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(On Higher Studies Abroad)

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Engr. Usama Ashfaq
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MSc Eng. (UET, Taxila)

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PhD (HUST, China)
(On Post Doc. abroad)

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MSc Eng. (COMSATS, Islamabad)

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MSc Eng. (UET, Taxila)

Lab Engineers

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BSc Eng. (UET, Taxila)

Engr. Komal Munir
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Shuja Irfan
BSc Eng. (UET, Taxila)

Engr. Aleem Zahid
BSc Eng. (CASE, Islamabad)
MSc Eng. (UET, Taxila)
(on Higher Studies Abroad)

The Department

The Department of Electrical Engineering was established in 1975 with creation of University College of Engineering & Technology, Taxila at Sahiwal. In 1978, the college was shifted to its permanent location at Taxila. The Electrical Engineering program provides basic preparation for a career in the discipline of Electrical Engineering. The department aims to develop abilities in the students for the application of the knowledge of Electrical Engineering. The students are provided with an educational foundation that prepares them for leadership roles along diverse career paths in the fields concerned with Electronics, Communications, Energy & Power Systems, and Industrial IT: Control & Automation. Presently, 200 undergraduate students are enrolled annually. The department has produced more than 3300 graduate students so far.

Program Mission

Learning and research with values to address the socio-economic challenges

Program Educational Objectives (PEOs)

The graduates will;
PEO-1: Possess knowledge and skills to address complex engineering problems in an optimized manner.
PEO-2: Serve as a valuable member in industry and research organization for socio-economic uplift while ensuring high moral values.
PEO-3: Demonstrate quest for continuous professional development through effective communication, teamwork, lifelong learning and sharing.

Core Values

- **Integrity**
- **Self-Discipline**
- **Cognition**
- **Team Spirit**

The undergraduate program offers degree in "Bachelor of Science in Electrical Engineering"

with following streams:

- **Power**
- **Communication**
- **Electronics**

An independent and spacious building with a covered area of 70,600 sq. ft. is available for the department. The department has three blocks namely: Main Block, Extension Block and Laboratory Block.

Laboratories and other Facilities

The Electrical Engineering Department has following well equipped laboratories. The detail of labs are as follows:

1. Basic Electrical Engineering

In this lab, the freshmen use appropriate lab tools for measurement of basic electrical quantities. They reproduce theoretical results of basic electrical laws and theorems by constructing the basic electrical circuits. The sophomores investigate and simulate RLC networks in time and frequency domain to perform various analysis in the network theory. They also use oscilloscopes, function generators, digital multimeters, and state of art circuit trainers.

2. Computer Simulation

The Computer Simulation Lab comprises 46 core I-7 computers to help students in completing course work. The computers are installed with a variety of software like MATLAB, Dev C++, Packet Tracer and MS Office for students of various subject covers in the Department of Electrical Engineering. The subjects covered during BSc Electrical Engineering in lab are Programming Fundamentals, Signal and Systems, Computer Communication Networks, Digital Image processing and Digital Signal processing.

3. Digital Systems

The Digital Systems Lab is one of the basic labs of Electrical Engineering Department. It's KL-31001 series Digital Logic Lab kits and ETS-5000 Digital Training Systems facilitate hands-on analysis of different combinational and sequential logic circuits by utilizing. Its key strength lies in the collection of microprocessors and microcontroller based trainers that empowers the development of concepts and design of embedded systems.

4. Electrical Machines

The electrical machines lab comprises of a variety of AC as well DC machines and transformers to educate the undergraduate students about the practical aspects related to their construction and working. This lab is also equipped with workstations to demonstrate the basic concepts related to power distribution and its utilization.

5. Electronics

The Electronics Lab comprises 5 workstations and a project area, where each workstation is equipped with essential tools such as a CRO (Cathode Ray Oscilloscope), a function generator, DMM, as well as Electronics Lab Trainer Kits and regulated DC power supply. These resources allow students to carry out practical experiments in both basic and advanced electronics courses. One of the main strengths of this lab is its emphasis on hands-on learning, enabling students to develop practical skills and knowledge that will help them excel in their future careers. Additionally, the lab's experienced instructors are dedicated to supporting students in achieving their academic goals.

6. High Voltage

The high voltage lab of electrical engineering department is purposely built lab for conducting undergraduate level experiments, projects and postgraduate and doctorate level research in area of high voltage and dielectrics and electrical insulation. The lab is equipped with state of the art equipment. The lab was established is equipped with 140kV energization facility which can generate AC, DC and Impulse Voltages. The lab also has a state of the art Partial Discharge Measuring Facility which is an advanced tool for Postgraduate and doctorate level research. The lab is frequently used for commercial activities other than teaching and research. This lab has developed a lot of activities and facilities for learning of students and industrial liaison. The lab is managed by well trained staff and supervised by a Director having excellent specialty in High Voltage Field.

7. Instrumentation and Measurements

The electrical instrumentation & measurements lab is a state-of-the-art facility equipped with a wide range of high-quality electrical measuring instruments. Its key strengths lie in its advanced collection of digital multimeters, True RMS meters, oscilloscopes, energy meters, and various DC and AC bridges. Additionally, the lab offers a diverse range of instrument transformers, resistive, capacitive, and inductive loads, and sensor module kits from renowned manufacturers like National Instruments. These tools enable cutting-edge research and experimentation in the field of electrical engineering, making the lab an invaluable asset for academic, research, and industry professionals.

8. Photonics and Communications

Photonics and communications lab is a research facility in the Electrical Engineering department that is currently at its initial stage of development. It is focused on the study of light and its applications in communication systems. The lab is dedicated to advancing the field of photonics and developing new and innovative communication systems The lab's research has important applications in telecommunications, healthcare, and environmental monitoring, among other fields. The lab aims to use cutting-edge technologies to develop new and advanced systems for transmitting and receiving information using light waves. Some key strengths of the Photonics and communications lab include expertise in Photonics, Advanced equipment, Interdisciplinary research, collaborative research, and innovation.

9. Power Systems

Power Systems Lab provides facility to conduct experiments related to different courses offered in power systems specialization at undergraduate level. Lab is equipped with state-of-the-art power transmission, protection and electrical machines training systems. This lab also provides facilities to test cables, conductors. earthing rods etc.

10. Power Electronics

The power electronics lab is an invaluable resource for the Electrical Engineering Department of our university. Equipped with a variety of advanced tools and technologies, such as Industrial Electronic Trainer sets KL-500, National Instrument Power Electronics Trainers and Accessories, DSP Board R&D Controller Kits, 4 channel Oscilloscopes, different types of Motor sets, National Instrument Virtual Benches, a LPKF S63 ProtoMat PCB milling machine and accessories, the lab provides students with hands-on experience in the field of power electronics. By utilizing this equipment, we can create a comprehensive and immersive learning environment, equipping students with the skills and knowledge necessary to pursue a career in the power electronics industry. Additionally, the lab's research and development work support the teaching curriculum, ensuring that it remains current and relevant

11. Power Systems Simulation

This Lab comprised of 50 state of the art computing machines. The computers are installed with different power system computation software i.e., MATLAB, PSSE, ETAP. This Lab covers different power systems stream courses for lab conduction. In addition to these, the lab also facilitates the postgraduate students to complete their research work.

12. Workshop and Projects

The workshop Lab of electrical engineering department is purposely built lab for conducting undergraduate level experiments regarding learning of basic skills related to electrical engineering including but not limited to cabling, wiring, lighting, metering, testing and other hands on work related to basic traits necessary for an electrical engineer working in the field. The lab is equipped with all necessary equipment including meters, meggars, Earth Testers, Workshop equipment, measuring tools, wiring mental, lighting sources, meters and other necessary equipment for performing all the required tasks in lab. This lab is managed by a well trained staff and supervised by a director.

13. Basic Control

The Basic Control Lab has been furnished with equipment to create basic understanding of

control systems. There are multiple servo-control units to carry out experiments along with associated computers and peripherals.

14. Advance Control

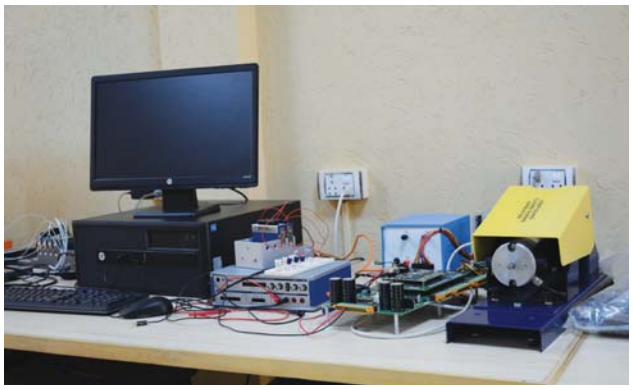
The Advance Control lab has been established with the vision to conduct post grad research of international level in the area of control systems. There are many specialized kits such as three wheeled robot, twin rotor aerodynamic system, inverted pendulum, ball in gravitational field, gyroscope, electrohydraulic system, air ship etc.

These laboratories are regularly upgraded as and when required.

Courses of Study

The Electrical Engineering curriculum develops a thorough understanding of the physical and mathematical principles underlying basic electrical processes and devices. Curriculum also provides students with a foundation in basic science, mathematics and the humanities. Written and oral communication skills are also emphasized and developed. The computers as a tool for mathematical analysis, design, data analysis and instrumentation are extensively used. Most of the courses have an integrated lab component which is supported by modern laboratories and state-of-the-art equipment and computers. Strong emphasis is placed on "hands-on" experience.

Laboratory projects are encouraged in second and third years, whereas final year projects are assigned keeping in view the industrial problems and, in most of the cases, in consultation with industrial experts.



The campus is located in an industrial environment and the students have a fair chance of industrial visits.

The curriculum of Electrical Engineering includes core and elective courses. The Elective Courses are included in the program to provide more breadth to the knowledge. In 3rd and 4th years, the students must register for Elective Courses according to their interests. Our degree is highly regarded by industry and independent assessors. The program is accredited by the Pakistan Engineering Council Under Level-II as satisfying the academic requirements for Registered Engineer (RE) status.

Postgraduate Studies & Research

The department started its postgraduate program in 1984 and doctoral study program in 2001. Until now 615 MSc and 44 PhDs have been produced. The post-graduate program offers a degree in "Master of Science in Electrical Engineering" with specializations in:

- **Electronics**
- **Communication & Signal Processing**
- **Control & Automation**
- **Power**

The master's degree courses are aimed at bringing the students abreast with the most recent developments in their fields of specialization. Most of the Postgraduate students are working with major engineering organizations of the country.

The faculty members and postgraduate students are actively involved in research. Currently, the department has 24 PhD and 16 MSc faculty members. The Department regularly arranges conferences, seminars, and workshop in various areas of electrical engineering. The faculty members, postgraduate students and prominent researchers from Pakistan and abroad participate in these seminars. The department has a well-stocked and up to date library for use of teachers and postgraduate students.

Courses Under Semester System
BSc Electrical Engineering

Semester - I

Course Code	Course Title	Credit Hours	Pre-Requisites
EE-111	Linear Circuit Analysis	3	Freshman Standing
EE-111-L	Linear Circuit Analysis Lab	1	Co-requisite: Linear Circuit Analysis
EE-112-L	Workshop Practice Lab	1	Freshman Standing
NS-113	Applied Physics	3	Freshman Standing
NS-113-L	Applied Physics Lab	1	Co-requisite: Applied Physics
NS-114	Calculus & Analytical Geometry	3	Freshman Standing
HU-115	Functional English	2	Freshman Standing
HU-116	Islamic Studies	2	Freshman Standing
	Semester Total	**16**	

Semester - II

Course Code	Course Title	Credit Hours	Pre-Requisites
EE-121	Electronic Devices & Circuits	3	Freshman Standing
EE-121-L	Electronic Devices & Circuits Lab	1	Co-requisite: Electronic Devices & Circuits
EE-122-L	Engineering Drawing Lab	1	Freshman Standing
CS-123	Programming Fundamentals	3	Freshman Standing
CS-123-L	Programming Fundamentals Lab	1	Co-requisite: Programming Fundamentals
IDE-124	Engineering Mechanics	3	Freshman Standing
IDE-124-L	Engineering Mechanics Lab	1	Co-requisite: Engineering Mechanics
NS-125	Differential Equations	3	Freshman Standing
HU-126	Pakistan Studies	2	Freshman Standing
	Semester Total	**18**	
	Total for First Year	**34**	

Semester - III

Course Code	Course Title	Credit Hours	Pre-Requisites
EE-211	Electrical Machines	3	Linear Circuit Analysis
EE-211-L	Electrical Machines Lab	1	Co-requisite: Electrical Machines
EE-212	Digital Logic Design	3	Sophomore Standing
ES-212-L	Digital Logic Design Lab	1	Co-requisite: Digital Logic Design
CS-213	Computing Elective	3	Mentioned against the list of computing electives
CS-213-L	Computing Elective Lab	1	Co-requisite: Same Computing Elective
NS-214	Complex Variables & Transforms	3	Sophomore Standing
HU-215	Communication Skills	2	Sophomore Standing
	Semester Total	**18**	

Semester - IV

Course Code	Course Title	Credit Hours	Pre-Requisites
EE-221	Electrical Network Analysis	3	Linear Circuit Analysis
EE-221-L	Electrical Network Analysis Lab	1	Co-requisite: Electrical Network Analysis
EE-222	Microprocessors & Microcontrollers	3	Digital Logic Design
EE-222-L	Microprocessors & Microcontrollers Lab	1	Co-requisite: Microprocessors & Microcontrollers
EE-223	Signals & Systems	3	Sophomore Standing
EE-223-L	Signals & Systems Lab	1	Co-requisite: Signals & Systems
EE-224	Probability Methods in Engineering	3	Sophomore Standing
NS-225	Linear Algebra	3	Sophomore Standing
	Semester Total	**18**	
	Total for Second Year	**35**	

Semester - V

Course Code	Course Title	Credit Hours	Pre-Requisites
EE-311	Linear Control Systems	3	Junior Standing
EE-311-L	Linear Control Systems Lab	1	Co-requisite: Linear Control Systems
EE-312	Communication Systems	3	Junior Standing
EE-312-L	Communication Systems Lab	1	Co-requisite: Communication Systems
EE-313	Electromagnetic Field Theory	3	Complex Variables & Transforms
IDE-314	Applied Thermodynamics	3	Sophomore Standing
IDE-314-L	Applied Thermodynamics Lab	1	Co-requisite: Applied Thermodynamics
NS-315	Natural Science Elective	3	Mentioned against the list of natural science electives
	Semester Total	**18**	

Semester - VI

Course Code	Course Title	Credit Hours	Pre-Requisites
MS-321	Management Science Elective I	3	Mentioned against the list of management science electives
HU-322	Social Science Elective I	3	Mentioned against the list of social science electives
HU-323	Technical Report Writing	3	Sophomore Standing
EE-32##	Breadth Core I (Restricted Elective)	3	Mentioned against the list of specialization electives
EE-32##-L	Breadth Core I (Restricted Elective) Lab	1	Co-requisite: Same Breadth Core I
EE-32##3	Breadth Core II (Restricted Elective)	3	Mentioned against the list of specialization electives
EE-32##-L	Breadth Core II (Restricted Elective) Lab	1	Co-requisite: Same Breadth Core II

	Semester Total	**17**	
	Total for Third Year	**35**	

Semester - VII

Course Code	Course Title	Credit Hours	Pre-Requisites
EE-411	Design Project	3	Senior Standing
MS-412	Management Science Elective II	3	Mentioned against the list of management science electives
HU-413	Social Science Elective II	3	Mentioned against the list of social science electives
EE-41##	Depth Elective I	3	Mentioned against the list of specialization electives
EE-41##-L	Depth Elective I Lab	1	Co-requisite: Same Depth Elective I
EE-41##	Depth Elective II	3	Mentioned against the list of specialization electives
EE-41##-L	Depth Elective II Lab	1	Co-requisite: Same Depth Elective II
	Semester Total	**17**	

Semester - VIII

Course Code	Course Title	Credit Hours	Pre-Requisites
EE-421-L	Final Year Design Project	3	Senior Standing
EE-42##	Depth Elective III	3	Mentioned against the list of specialization electives
EE-42##-L	Depth Elective III Lab	1	Co-requisite: Same Depth Elective III
EE-42##	Depth Elective IV	3	Mentioned against the list of specialization electives
EE-42##-L	Depth Elective IV Lab	1	Co-requisite: Same Depth Elective IV
EE-42##	Depth Elective V	3	Mentioned against the list of specialization electives
EE-42##-L	Depth Elective V Lab	1	Co-requisite: Same Depth Elective V
	Semester Total	**15**	
	Total for Fourth Year	**32**	
	Total Credit Hours of 4 Years	**136**	

Computing Electives

Course Title	Pre-requisite(s)
Data Structures & Algorithms	Sophomore Standing
Machine Learning	Sophomore Standing
Software Engineering	Sophomore Standing
Databases	Sophomore Standing
Artificial Intelligence	Sophomore Standing
Mobile Application Development	Sophomore Standing
Web Application Development	Sophomore Standing
Network Security	Sophomore Standing

Natural Science Electives

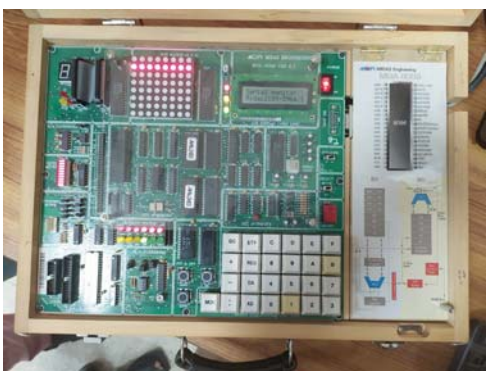
Course Title	Pre-requisite(s)
Numerical Analysis	Sophomore Standing
Multivariable Calculus	Sophomore Standing
Discrete Mathematics	Sophomore Standing
Chemistry	Sophomore Standing
Biology	Sophomore Standing

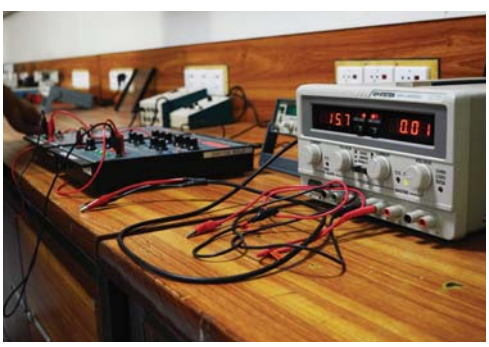
Management Science Electives

Course Title	Pre-requisite(s)
Engineering Economics & Management	Junior Standing
Engineering Project Management	Junior Standing
Entrepreneurship	Junior Standing
Principles of Management	Junior Standing
Leadership & Personal Grooming	Junior Standing

Social Science Electives

Course Title	Pre-requisite(s)
Professional Ethics	Junior Standing
Sociology for Engineers	Junior Standing
Critical Thinking	Junior Standing
Organizational Behavior	Junior Standing
Professional Psychology	Junior Standing





SPECIALIZATION ELECTIVES
Power

Course Code	Course Title	Pre-requisite(s)
9A	**Power System Analysis (Breadth Core I)**	**Electrical Network Analysis**
9B	**Power Distribution & Utilization (Breadth Core II)**	**Electrical Network Analysis**
9C	Instrumentation & Measurements	Linear Circuit Analysis
9D	Power Electronics	Electronic Devices & Circuits
9E	Electrical Power Transmission	Electrical Network Analysis
9F	Power System Protection	Power System Analysis
9G	Power System Operation & Control	Power System Analysis
9H	Renewable Energy Systems	Junior Standing
9I	High Voltage Engineering	Senior Standing
9J	Industrial Automation	Senior Standing
9K	Digital Signal Processing	Signals & Systems
9L	Power Generation	Electrical Machines
9M	Smart Grid	Communication Systems
9N	Electrical Machine Design	Electrical Machines
9O	Industrial Drives	Power Electronics
9P	Advanced Electrical Machines	Electrical Machines
9Q	FACTS & HVDC Transmission	Senior Standing
9R	Electrical Estimation, Installation and Planning	Senior Standing

Communication

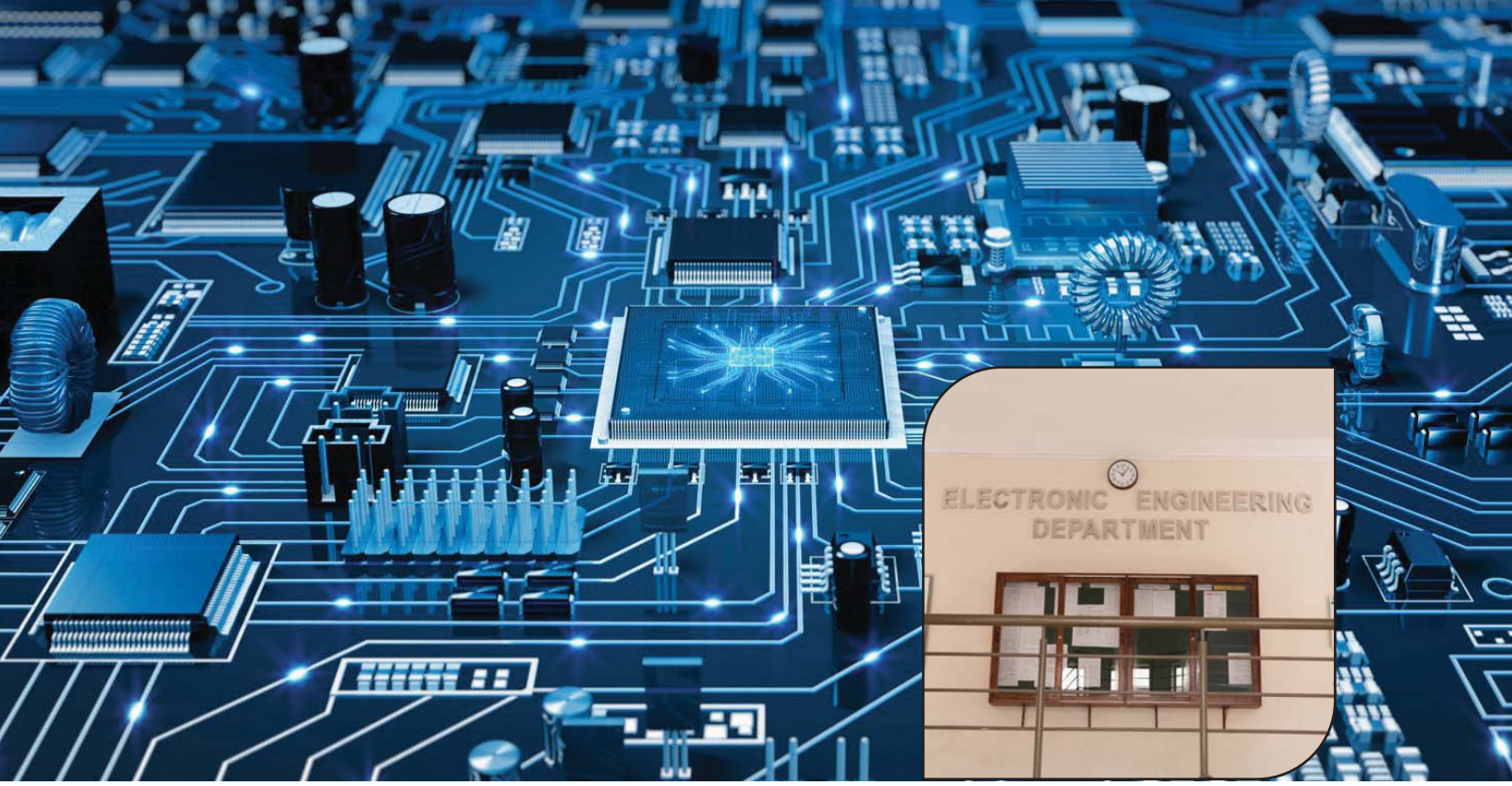
Course Code	Course Title	Pre-requisite(s)
8A	**Electronic Circuit Design (Breadth Core I)**	**Electronic Devices & Circuits**
8B	**Computer Communication Networks (Breadth Core II)**	**Junior Standing**
8C	Instrumentation & Measurements	Linear Circuit Analysis
8D	Power Electronics	Electronic Devices & Circuits
8E	RF & Microwave Engineering	Electromagnetic Field Theory
8F	Digital Image Processing	Signals & Systems
8G	Antenna & Wave Propagation	Electromagnetic Field Theory
8H	Digital Communication	Communication Systems
8I	Optical Communication	Communication Systems
8J	Industrial Automation	Senior Standing
8K	Digital Signal Processing	Signals & Systems
8L	Wireless & Mobile Communication	Communication Systems
8M	Communication Electronics	Communication Systems
8N	Satellite Communication	Communication Systems
8O	Navigation & Radar Systems	Communication Systems
8P	Microelectronics	Senior Standing

Electronics

Course Code	Course Title	Pre-requisite(s)
7A	**Electronic Circuit Design (Breadth Core I)**	**Electronic Devices & Circuits**
7B	**Power Electronics (Breadth Core II)**	**Electronic Devices & Circuits**
7C	Instrumentation & Measurements	Linear Circuit Analysis
7D	Optoelectronics	Electronic Devices & Circuits
7E	RF & Microwave Engineering	Electromagnetic Field Theory
7F	Integrated Electronics	Electronic Circuit Design
7G	Antenna & Wave Propagation	Electromagnetic Field Theory
7H	Digital System Design	Digital Logic Design
7I	Industrial Electronics	Electronic Devices & Circuits
7J	VLSI Design	Digital Logic Design
7K	Digital Signal Processing	Signals & Systems
7L	Solid State Device Physics	Electronic Devices & Circuits
7M	Introduction to Nanotechnology	Junior Standing
7N	Biomedical Instrumentation	Senior Standing
7O	Microelectronics	Senior Standing

Notes:

1. Theory and Lab courses are treated as separate courses.
2. Choice of Electives in 7th and 8th semesters will depend on Elective chosen in 6th semester. No student can change the specialization area after choosing any of three areas above in his 6th Semester.
3. The Elective courses offered by the Department in a semester can be changed depending on the availability of teachers and related facilities and will be notified one week before the start of the semester.
4. Before registering courses in a semester, it is necessary that the relevant pre-requisite courses have been studied by the student in earlier semesters.



DEPARTMENT OF ELECTRONICS ENGINEERING

Chairman

Prof. Dr. Yaseer Arafat Durrani

Professor

Dr. Yaseer Arafat Durrani
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MSc Eng. (KTH, Sweden)
PhD (UPM, Spain)

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PhD (UET, Taxila)

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PhD (UET, Taxila)

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PhD (SKKU, South Korea)

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PhD (UET, Taxila)

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MSc Eng. (UET ,Taxila)

Engr. Muhammad Atif Imtiaz
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MSc Eng. (UET ,Taxila) (on study leave)

Engr. Qammar Zaman
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MSc Eng. (UET, Taxila) (on study leave)

Lab Engineers

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MSc Engg. (NUST, Islamabad)

Engr. Sumair Aziz
BS Eng. (IIU, Islamabad)
MSc Engg. (COMSATS, Islamabad)

Engr. Muhammad Umar Khan
BSc Eng. (COMSATS, Abbottabad)

Engr. Shujaat Hussain Shah
BSc Eng. (UET Peshawar)

Engr. Tahir Khan
BSc Eng. (IIUI, Islamabad)
MSc Eng. (HITEC Uni, Taxila)

The Department

The Department of Electronics Engineering was established in 2010 to fulfill the needs of the country by producing responsible graduates equipped with sound knowledge and skills along with highest moral values through conducive, learning environment. The department offers Electronics Engineering degree programs at undergraduate and graduate level. Currently, undergraduate program in "Bachelor of Science in Electronics Engineering" is accredited with Pakistan Engineering Council at Level-II (i.e. OBE based) and postgraduate program is approved and registered with Higher Education Commission Pakistan.

The current enrollment of undergraduate students is 50 per year. The students are provided with an educational foundation that prepares them to choose their carrier in Academic, Industrial or other areas. Students of the department often participate and win multiple national competitions related to technical and co-curricular activities that depict the strength of our program.

Program Mission

Provide quality education in Electronics Engineering imparting sound engineering knowledge and skills in order to fulfill the demands of industry and service sector.

Program Educational Objectives (PEO's)

The broad objectives of the undergraduate Electronics Engineering Program are as follows:

PEO-1: Proficiency in engineering knowledge and tools for the design, analysis and evaluation of complex engineering problems.

PEO-2: Enhance their knowledge and skills while providing effective solutions keeping in view the environmental and societal aspects.

PEO-3: Contribute as a team member or manager, demonstrating professionalism.

Laboratories and other Facilities

Lab is an integrated part of most of the theory courses. The laboratories in the Department

have state-of-the-art equipment for fulfilling the needs of the modern era. The lab sessions are designed in order to enhance the concepts studied in the theoretical session, to gain hands-on experience and to explore the practical applications of the subject. The Electronics Engineering Department has following state-of-the-art laboratories::

1. Basic Electronics Lab
2. Digital Electronics Lab
3. VLSI Design Lab
4. Embedded Systems Lab
5. Instrumentation Lab
6. Control Systems Lab
7. DSP & Communication Lab
8. Computer Lab
9. Project Lab

Post Graduate Studies

The department has been mandated by the university to start its postgraduate program since 2014. It has an academic staff of 14, among those 17 faculty members are involved in postgraduate teaching and are involved in PhD research work. The department offers both MSc. and PhD. Postgraduate programs recognized by the HEC with the following specializations:

- Electronics System Design
- Microelectronic Materials & Devices
- Biomedical Electronics

The courses contain a balance of professional and analytical aspects and are designed to suit the needs of fresh graduates and those with professional career development. The faculty of Electronics Engineering Department is highly qualified and holds diverse research interests in the above-mentioned areas. In addition to their academic responsibilities, the faculty is involved in conducting quality research in their respective fields of investigation.

Courses of Study

The Department has taken the initiatives for implementing the Outcome-based Education (OBE) system effectively in 2015. In this regard, the department defined its broad objectives about the Engineering, leadership, and continuous professional development skills for BSc Electronics Engineering program. The courses offered by the department prepares the students to achieve these skills and are built on the strong foundation on the basic principles of the electronic devices, circuits, systems, and technology including mathematics, basic sciences, and humanities. The written and oral communication skills are being developed among students.

The undergraduate curriculum is carefully designed to cover different areas of the Electronics Engineering. The department offers following areas of courses:

- Electronics
- Computer
- Robotics
- Telecommunication
- Embedded and Control Systems

Courses Under Semester System
BSc Electronics Engineering

Semester - I

Course Code	Course Title	Th.	Lab	Pre-Requisites
BH-111	Functional English	3	0	
BH-112	Calculus-I	3	0	
BH-113	Applied Physics	3	1	
CS-114	Computer Fundamentals & Program-ming	2	1	
BH-115	Islamic Studies/Ethics	2	0	
EN-116	Workshop Practice	0	1	
	Total	**13**	**03**	
	Semester Total	**16**		

Semester - II

Course Code	Course Title	Th.	Lab	Pre-Requisites
CS-121	Object Oriented Programming	2	1	Computer Fund. & Prog.
BH-122	Differential Equations	3	0	Calculus-I
BH-123	Calculus-II	3	0	Calculus-I
EN-124	Circuit Analysis-I	3	1	
EN-125	Solid-State Electronics	3	0	
	Total	**14**	**02**	
	Semester Total	**16**		
	Total for First Year	**32**		

Semester - III

Course Code	Course Title	Th.	Lab	Pre-Requisites
BH-211	Linear Algebra	3	0	
BH-212	Technical Report Writing & Communication Skills	3	0	
EN-213	Digital Logic Design	3	1	
EN-214	Circuit Analysis-II	3	1	Circuit Analysis-I
EN-215	Electronic Devices & Circuits	3	1	Solid State Electronics
	Total	**15**	**03**	
	Semester Total	**18**		

Semester - IV

Course Code	Course Title	Th.	Lab	Pre-Requisites
BH-221	Complex Variables & Transforms	3	0	Differential Equations
EN-222	Probability & Random Variables	3	0	
EN-223	Microprocessors & Micro controllers	3	1	Digital Logic Design
EN-224	Electrical Machines	3	1	Circuit Analysis-II
EN-225	Electronic Circuit Design	3	1	Electronic Devices & Circuits
	Total	**15**	**03**	
	Semester Total	**18**		
	Total for Second Year	**36**		

Semester - V

Course Code	Course Title	Th.	Lab	Pre-Requisites
BH-311	Social Sciences Elective I	3	0	
EN-312	Integrated Electronics	3	1	Electronic Circuit Design
EN-313	Signals Processing	3	1	Complex Variables & Transforms
EN-314	Electromagnetic Field Theory	3	0	Calculus-II
EN-315	Instrumentation & Measurements	3	1	
	Total	**15**	**03**	
	Semester Total	**18**		

Semester - VI

Course Code	Course Title	Th.	Lab	Pre-Requisites
BH-321	Social Sciences Elective II	3	0	
EN-322	Analog & Digital Communication	3	1	Signals & Systems
EN-323	Control Systems	3	1	Complex Variables & Transform
EN-324	Power Electronics	3	1	Circuit Analysis-II
BH-325	Pakistan Studies	2	0	
	Total	**14**	**03**	
	Semester Total	**17**		
	Total for Third Year	**33**		

Semester - VII

Course Code	Course Title	Th.	Lab	Pre-Requisites
MS-411	Management Sciences Elective I	3	0	
EN-412	VLSI Design	3	1	Integrated Electronics
EN-4XX	Elective-I	3	1	
XX-4XX	Elective-II	3	0/1	See list of Elective Courses
EN-499A	Electronics Engineering Project	0	3	
	Total	**12**	**5/6**	
	Semester Total	**17/18**		

Semester - VIII

Course Code	Course Title	Th.	Lab	Pre-Requisites
MS-421	Management Sciences Elective II	3	0	
XX-4XX	Elective-III	3	0/1	See list of Elective Courses
XX-4XX	Elective-IV	3	0/1	See list of Elective Courses
EN-499B	Electronics Engineering Project	0	3	
	Total	**09**	**3/5**	
	Semester Total	**12/14**		
	Total for Final Year	**29/32**		
	Grand Total for Four Years	**130/133**		

List of Elective Courses

Course Code	Course Title	Th.	Lab	Pre-Requisites
EN-413	FPGA-based System Design	3	1	Digital Logic Design
EN-414	Embedded Systems Design	3	1	Microprocessors & Microcontrollers
EN-415	Microelectronics Technology	3	0	
EN-416	Microprocessor-based System Design	3	1	Microprocessors & Microcontrollers
EN-417	Digital System Design	3	1	Integrated Electronics
EN-418	Opto-Electronic Devices	3	0	Applied Physics
EN-419	Analog & Mixed Signal Design	3	1	Integrated Electronics
EN-420	IC Testing and Verification	3	0	
EN-421	Computer Architecture	3	1	Microprocessors and Microcontrollers
EN-422	Industrial Electronics	3	1	Power Electronics
EN-423	Industrial Automation	3	1	Instrumentation & Measurements
EN-424	Digital Control Systems	3	1	Control Systems
EN-425	State-Space Control Design	3	1	Control Systems
EN-426	Microwave Engineering	3	0	Electromagnetic Field Theory
EN-427	RF Electronics	3	0	Electromagnetic Field Theory
EN/CS-428	Computer Communication Networks	3	1	Analog and Digital Communications
EN/CS-429	Telecommunication & Networks	3		Analog and Digital Communications
EN-430	Laser and Fiber Optics	3	0	Applied Physics
EN-431	Advanced Signal Processing	3	1	Signal Processing
EN/CS-432	Digital Image Processing	3	1	Digital Signal Processing
EN-433	Wireless Communications	3	0	Analog and Digital Communications
EN-434	Wave Propagation and Antennas	3	1	Electromagnetic Field Theory
EN-435	Artificial Intelligence	3	0	Object Oriented Programming
EN-436	Machine Learning	3	0	Object Oriented Programming
EN-437	Operating Systems	3	0	Computer Fundamentals & Programming
EN/CS-438	Introduction to Neural Networks	3	0	
EN/CS-439	Fuzzy Logic	3	0	
EN-440	Introduction to Nanotechnology	3	0	Solid-State Electronics
EN-441	Biomedical Instrumentation	3	1	Instrumentation & Measurements
EN/MT-442	Introduction to Robotics	3	0	Linear Algebra
BH-443	Numerical Methods	3	0	
BH-444	Statistical Methods	3	0	

Notes:

1. Theory and Lab courses are treated as separate courses.
2. All the above mentioned Elective courses are either 3+0 credit hours or 3+1 credit hours. The Elective courses (either 3+0 or 3+1) offered by the department in a semester can be changed depending on the availability of teachers and related Lab facility and will be notified before the start of the semester.
3. Before registering courses in a semester, it is necessary that the relevant pre-requisite courses have been studied by the student in earlier semesters.

List of Social Sciences Elective Courses

Course Title
Professional and Social Ethics
Sociology and Development
Social Anthropology
Understanding Psychology and Human Behavior
Applied Psychology
Organizational Behavior
Introduction to Sociology
Critical Thinking
Introduction to Philosophy

List of Management Sciences Elective Courses

Course Title
Engineering Economics & Management
Engineering Project Management
Entrepreneurship
Principles of Management
Leadership & Personal Grooming

3 Faculty of Mechanical and Aeronautical Engineering

This faculty has one degree awarding department:

- Department of Mechanical Engineering

DEPARTMENT OF MECHANICAL ENGINEERING

Chairman

Prof. Dr. Riffat Asim Pasha

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PhD (UET, Taxila)

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Post Doc (Changwon National Uni, SK)

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(on higher studies abroad)

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Engr. Abdul Rehman
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MSc Eng. (UET, Lahore)

The Department

Program Mission

To produce competent Mechanical Engineers who possess professional ethics.

Program Educational Objectives (PEOs)

The program educational objectives for the Mechanical Engineering program are to educate graduates who will be ethical, productive, and contributing members of society.

Our objectives are that the graduate;
PEO-1: Apply knowledge and skills to solve engineering problems effectively.
PEO-2: Demonstrate management skills and professional ethics for productive team work.
PEO-3: Exhibit quest for continual learning to provide socio-technical solutions.

Courses of Study

The Mechanical Engineering courses are built on a strong foundation of mathematical,

physical, and computing sciences. Emphasis is laid on the fundamental concepts and principles, which constitute the basis of mechanical engineering practice. The curriculum is designed to cover a broad range of areas. The department offers a series of courses in the following areas:

- Thermo Fluids
- Applied Mechanics and Design
- Manufacturing Processes
- Engineering Management
- Natural Sciences and Humanities

The courses in Thermo-Fluid Engineering include applied Thermodynamics, Refrigeration and Air conditioning, Heat and Mass Transfer, Power Plant, Fluid Mechanics and Gas Dynamics. The department offers a wide range of courses in Applied Mechanics and Design. Starting from a basic course in Engineering Statics, a series of courses are offered in Mechanics of Materials and Mechanics of Machines. These theoretical concepts are fostered in a series of Machine Design courses enabling the students to try their skills and design small mechanical equipment. Product design is of no use without product development studies. Manufacturing Processes Engineering deals with the smart and economical product development methodologies. Students start with Workshop Technology in this area. Successive courses in Engineering Materials, Manufacturing Processes and Production Automation provide the students further insight to this area. Additional courses like Engineering Management and Economics in senior year introduce students to the efficient management of the productive resources. Computer based mechanical engineering concepts have been embedded in various courses like Computer Programming, Machine Design, CAD and Thermo-Fluids Engineering etc.

The University has a rich industrial neighborhood. The students can make maximum use of this industrial environment by engaging themselves in short term as well as long term training. These industries include HIT, HMC, POF, PAF complex at Kamra, HEC, KSB, TIP, CTI, ARL, OGTI, Railway Carriage Factory, Research Establishments of PAEC, NESCOM and many units in the Hattar area. The students pick real world problems either for their semester papers or as final year project from these organizations and brush their skills.

Postgraduate Studies & Research

The department is offering master's degree program since 1983. Many engineering graduates have made use of this program in a variety of areas. The program involves two years of part time as well as full time study and consists of lectures, design, office work, laboratory investigation, software usage and application of computational methods and research. The emphasis is on introducing students to modern trends and techniques and advanced knowledge in their fields of specialization. The department has adequate research facilities including licensed software, state of the art laboratories and access to published literature to meet the needs of postgraduate students to do their master's program. The department is also offering PhD Program since 2001. Up till now 36 students have completed their PhD degrees. By the end of year 2023 it is expected that the tally of completed PhDs from the MED would be 40 and quite a few are nearing the mature stage of their research.

Laboratories & other Facilities

The department has the following well-equipped laboratories to meet the academic requirements of students and teachers as well as the professional needs of the government and private organizations:

1. Applied Thermodynamics
2. Mechanics of Materials
3. Refrigeration & Air Conditioning
4. Fluid Mechanics
5. Heat and Mass Transfer
6. Mechanics of Machines
7. Power Plants Lab
8. Internal combustion Engines
9. Engineering Materials
10. Modelling and Simulation
11. Engineering Mechanics
12. Drawing Hall
13. Control/M&I
14. Mechanical Vibrations
15. Fracture Mechanics & Fatigue
16. Fluid Structure Interaction
17. Machine Tool
18. Advanced Microscopy & Imaging
19. Workshops
20. Renewable Energy Research & Development Center (RERDC)
21. Composite Materials and Smart Structures

Mechanical Engineering Department (MED) is continuously upgrading and strengthening its laboratories in terms of modern research equipment at both undergraduate and postgraduate levels. The strengthening of the laboratories in the Mechanical Engineering Department is being carried out through the grant of Rs. 74.9 M received from the planning commission under the central project of UET, Taxila titled "Strengthening and Upgradation (SAUG)" of Labs. In this project the equipment includes the wide range of design and thermal fields of mechanical engineering such as supersonic wind tunnel, advanced spectrum analyzer, tribo tester, thermal chamber for thermal analysis, scanning electron microscope (SEM), buckling tester, gyroscope apparatus etc. The bulk of the equipment is already installed and under operation in various relevant labs of MED i.e. Mechanics of Machines, Mechanics of Materials, Fracture Mechanics and Fatigue, Thermodynamics, Fluid Mechanics and Fluid Structure Interaction Labs.

The scope of research in the field of material science remains always a challenging job. The testing of materials: their analysis is always helpful for the new researcher to explore the various properties and characteristics of materials. The Fracture Mechanics & Fatigue laboratory is established in the extension block of Mechanical Engineering Department at ground floor comprising a covered area of 3500 sqft. The idea to establish this advance laboratory was to enhance the research and development activities in the field of fatigue and fracture. The laboratory is equipped with many state-of-the-art highly precise testing equipment along with related specimen preparation facility. The laboratory is equipped with experimental facilities capable to satisfy the needs of postgraduate and undergraduate studies as well as industry R&D. Furthermore, this laboratory is potentially able to produce internationally scaled research work in

the field of fracture mechanics, fatigue of engineering materials and structures and failure analysis of engineering components and related equipment, particularly defense organizations. Scanning Electron Microscope is an addition to the Fracture Mechanics and Fatigue Lab. It can deliver micrographs at 1-million-time magnification, principally used to see material phases, fracture morphology and other properties of materials.

The Composite Materials and Smart Structures laboratory is a state-of-the-art lab which constitutes latest manufacturing techniques for Advanced Composite Materials, Nanocomposites, and Smart Structures. It has diversified facility of synthesis of different Nanomaterials like Graphene Nanoplatelets, Silver Nanoparticles, Gold Nanoparticles, Carbon Nanotubes, and Polymer based Composites. These sensors developed here are being used for different mechanical applications like structural health monitoring of composite structures and mechanical characterization of advanced materials. Fiber Metal Laminates (FMLs) like ARALL, CARALL, GLARE, and Hybrid Al-Fabric composites are also developed and characterized.

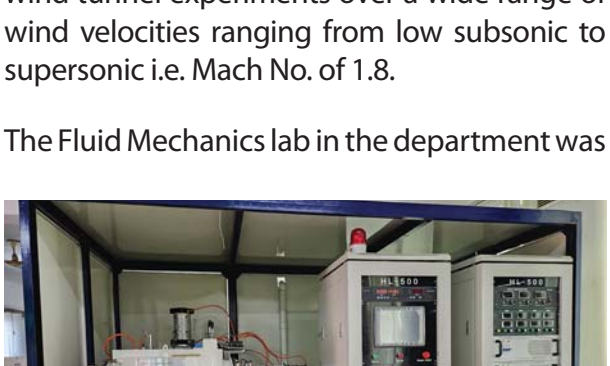
Fluid Structure Interaction is a newly established lab comprising of Supersonic Wind Tunnel, a Subsonic Wind Tunnel and a FIV Monitoring Test Rig. This lab will provide an opportunity to the graduate/ undergraduate students to perform wind tunnel experiments over a wide range of wind velocities ranging from low subsonic to supersonic i.e. Mach No. of 1.8.

The Fluid Mechanics lab in the department was renovated and brought up to the state of the art under the "strengthening of labs project" of HEC. A considerable amount was spent under the project to procure new experimental equipment. The Fluid Mechanics Lab today boosts twelve state of the art experimental equipment, including sub-sonic wind tunnel, forced and free vortex generator and parallel and series pump test bed.

A Modelling and Simulation Laboratory has been established to provide facilities for 2D/3D automated drafting, C++ programming and Digital Simulation. Computer based design and optimization techniques are being employed for teaching various courses in the networking environment and considerable number of modern computers are available in the Department.

The Department shares AMS Lab with Department of Industrial Engineering, which include the state-of-the-art manufacturing facilities with CNC (M100), computer Integrated manufacturing with AGVs/ASRS and virtual prototyping models.

The department has also established a new Renewable Energy Research & Development Center (RERDC). The purpose of the RERDC is to reduce the existing deficiency in research facilities in the Pakistani universities especially in energy sector to support the Pakistani energy policy and departmental priorities for increasing the viability and deployment of renewable energy through system design and prototype development and optimization that enhance domestic benefit from renewable energy development.



Courses Under Semester System
BSc Mechanical Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
HU-101	Functional English	2	0
MS-101	Health, Safety and Environment	1	0
NS-101	Calculus and Analytical Geometry	3	0
NS-102	Applied Chemistry	2	0
CS-101	Computer Systems and Programming	2	1
ME-111	Engineering Drawing and Graphics	2	1
ME-131	Workshop Practice	1	1
	Total	**13**	**3**
	Semester Total	**16**	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EE-102	Electrical Engineering	2	1
NS-103	Applied Physics	2	1
NS-104	Linear Algebra and Ordinary Differential Equations	3	0
ME-112	Engineering Mechanics-I: Statics	3	0
ME-113	Engineering Materials	2	1
ME-114	Computer Aided Drawing	0	1
ME-121	Fluid Mechanics-I	3	0
	Total	**15**	**4**
	Semester Total	**19**	
	Total for First Year	**35**	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
NS-205	Complex Variables and Transforms	3	0
ME-211	Engineering Mechanics-II: Dynamics	2	0
ME-212	Engineering Mechanics Lab	0	1
ME-213	Mechanics of Materials-I	3	0
ME-221	Fluid Mechanics-II	3	0
ME-222	Fluid Mechanics Lab	0	1
ME-223	Thermodynamics-I	3	0
ME-231	Manufacturing Processes-I	2	0
	Total	**16**	**2**
	Semester Total	**18**	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
HU-202	Islamic Studies	2	0
NS-206	Numerical Analysis	3	0
ME-214	Mechanics of Materials-II	3	0
ME-215	Mechanics of Materials Lab	0	1
ME-216	Machine Design -I	2	0
ME-224	Thermodynamics-II	2	0
ME-225	Thermodynamics Lab	0	1
ME-232	Manufacturing Processes-II	2	0
ME-233	Manufacturing Processes Lab	0	1
	Total	**14**	**3**
	Semester Total	**17**	
	Total for Second Year	**35**	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EE-303	Electronics Engineering	2	1
HU-303	Communication Skills	1	1
NS-307	Applied Statistics	2	0
ME-311	Machine Design-II	3	0
ME-312	Computer Aided Engineering	0	1
ME-321	Heat and Mass Transfer	3	0
ME-331	Measurement & Instrumentation	2	0
	Total	**13**	**3**
	Semester Total	**16**	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MS-302	Engineering Economics	2	0
HU-304	Technical Report Writing & Presentation Skills	2	0
ME-313	Mechanics of Machines	3	0
ME-322	Refrigeration and Air Conditioning	3	0
ME-323	Heat Transfer and R & A/C Lab	0	1
ME-324	Power Plants	2	0
ME-332	Control Engineering	3	0
ME-333	M&I and Control Lab	0	1
	Total	**15**	**2**
	Semester Total	**17**	
	Total for Third Year	**33**	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MS-4XY	Management Elective	2	0
HU-405	Pakistan Studies	2	0
ME-411	Mechanical Vibrations	3	0
ME-412	Mechanisms and Mechanical Vibrations Lab	0	1
ME-421	Internal Combustion Engines	3	0
ME-422	Power Plants and IC Engines Lab	0	1
ME-4XY	Technical Elective-I	2	1
ME-499-A	Design Project-I	0	3
	Total	**12**	**6**
	Semester Total	**18**	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MS-404	Entrepreneurship	1	0
HU-406	Social Sciences	2	0
ME-413	Finite Element Methods	2	1
ME-4XY	Technical Elective-II	2	1
ME-4XY	Technical Elective-III	2	1
ME-499-B	Design Project-II	0	3
	Total:	**9**	**6**
	Semester Total	**15**	
	Total for Final Year	**33**	
	Grand Total for Four Years	**136**	

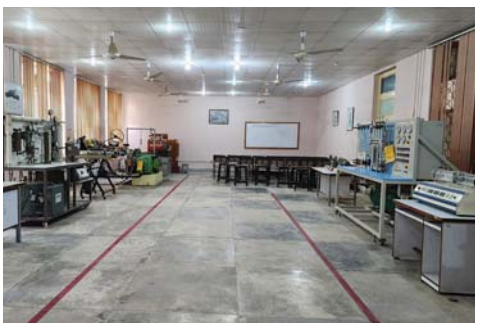
Note:
Theory and Lab courses are treated as separate courses.

Technical Electives

Course Code	Course Title
ME-414	Tribology
ME-415	Mechanical Engineering Design Analysis
ME-416	Stress Analysis
ME-417	Composite Materials
ME-423	Renewable Energy Technology
ME-424	Gas Dynamics
ME-425	Aerodynamics
ME-426	Computational Fluid Dynamics (CFD)
ME-427	Nuclear Engineering
ME-428	Automotive Engineering
ME-431	Advanced Manufacturing Systems
ME-432	Introduction to Mechatronics
ME-433	Robotics
ME-434	Maintenance Engineering

Management Electives

Course Code	Course Title
MS-403	Operations Management
MS-405	Total Quality Management
MS-406	Project Management
MS-407	Operations Research
MS-408	Engineering Law
MS-409	Supply Chain Management



4 Faculty of Industrial Engineering

This faculty has following degree awarding department:

- Department of Industrial & Manufacturing Engineering

DEPARTMENT OF INDUSTRIAL & MANUFACTURING ENGINEERING

Chairman

Prof. Dr. Mirza Jahanzaib

Professors

Dr. Mirza Jahanzaib
BSc. Eng. (UET, Lahore)
MSc. Eng. (UET, Taxila)
PhD (Taxila, IRSIP, UK)

Dr. Wasim Ahmad
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (Cranfield Uni. UK)

Associate Professors

Dr. Hafiz M. Khuram Ali
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Salman Hussain
BSc. Eng. (UET, Taxila)
MSc. Eng. (LSBU, UK)
PhD (LSBU, UK)

Dr. Saif Ullah
BSc. Eng. (UET, Taxila)
MSc. Engg. (HUST China),
PhD (HUST, China)
Post Doctorate (HUST, China)

Assistant Professors

Engr. Syed Turab Haider
BSc. Eng. (UET, Taxila)
MSc. Eng. (Brunel University, UK)

Dr. Muhammad Sajid
BSc. Eng. (UET, Taxila)
MSc. Eng. (UET, Taxila)
PhD (UET, Taxila)

Lecturers

Dr. Abid Ali
BSc. Eng. (PU, Lahore)
MSc. Eng. (UET, Taxila)
PhD (UET Taxila)

Engr. Haji Bahader Khan
BSc. Eng. (PU, Lahore)
MSc. Engg. (UET, Taxila)

Dr. Zaheer Ahmad
BSc. Eng. (UET, Lahore)
MSc. Eng. (UET, Taxila)
PhD (UNIVAQ, Italy)

Engr. Zahid Rashid
BSc. Eng. (PU Lahore)
MSc. Eng. (UET, Taxila)
PhD (Technical University Berlin, Germany) (In Process)

Engr. Irshad Yehya
BSc. Eng. (PU, Lahore)
MSc. Eng. (UET, Taxila)
(On Higher Studies Abroad)

Dr. Aisha Tayyab
BSc. Eng. (UET, Lahore)
MSc. Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Muhammad Awais Islam
BSc. Eng. (PU, Lahore)
MSc. Eng. (PU, Lahore)

Lab Engineers

Dr. Muhammad Jawad
BSc. Eng. (UET, Lahore)
MSc. Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Muhammad Usman
BSc. Eng. (PU, Lahore)
MSc. Eng. (UET, Taxila)

Introduction

Industrial and Manufacturing Engineering involves two main streams: systems engineering and manufacturing engineering. Systems engineering is concerned with the Design, Analysis, Operations, and maintenance of systems. These can range from a consumer product or single piece of equipment to large business, social, and environmental systems. The System Engineer's interest lies in modelling system functions and determining how the best objectives of the system can be achieved. Manufacturing engineering on the other hand, deals with the design and manufacturing of products by employing conventional and non-conventional manufacturing technologies. Manufacturing Engineer tends to choose best materials, technology, efficient workforce, and optimum use of resources to produce quality products.

The methods employed in Industrial and Manufacturing Engineering provide an excellent vehicle to perform costs and benefits analysis on both private and public sectors. Industrial Engineers determine the most effective way to utilize the basic factors of production, people, ma- chines, materials, information, and energy to make a product or provide a service.

Industrial and Manufacturing Engineers by virtue of education and training have opportunity to work in a variety of departments and businesses. The distinctive aspects of industrial engineering are the flexibility that it offers. Whether it is shortening a rollercoaster line, streamlining an operating room, distributing products worldwide, or manufacturing superior automobiles, all share the common goal of saving money and increasing efficiencies. The need for Industrial and Manufacturing Engineers is growing day by day. Industrial and Manufacturing Engineers are multitasking individuals who have the skills to improve quality and productivity of processes and systems.

Industrial and Manufacturing Engineers have the capabilities to figure out how to do things better. Industrial Engineers do multitask that improve quality and productivity of processes and systems.

The Department

Industrial Engineering with Production and Manufacturing major was the first MSc degree program offered at the university way back in 1983. Industrial Engineering had assumed a distinctive place as sub-discipline in Mechanical Engineering Department since then. With the creation of Industrial Engineering Department, this program has been shifted to the department. An independent four-year program leading to BSc degree in Industrial Engineering has been introduced with 2010-entry at the university. From 2023 intake, the BSc Degree program of Industrial and Manufacturing is being offered in Department of Industrial Engineering.

Apart from BSc Engineering program, department is also offering MSc and PhD degree programs in the field of Industrial Engineering and Engineering Management. The BSc program of Industrial Engineering has been accredited with PEC for four years on Out-come Based Education (OBE) system for Entries 2017, 2018, 2019 and 2020.

Program Mission

To produce Industrial Engineers who are prepared to fulfill the needs of manufacturing and service sector.

Program Education Objectives (PEOs)

The program educational objectives are to enable graduates;

PEO-1: To become successful Industrial Engineers in their career.

PEO-2: To practice knowledge, skills and abilities gained for the advancement of society.

PEO-3: To promote professionalism in engineering practice.

Courses of Study

The Industrial and Manufacturing Engineering courses are built on fundamentals of Mathematical, Physical and Computing Sciences. The curriculum is designed to educate students in diverse areas of theory and practices in engineering and management domains. The following areas are specifically enriched for disseminating state-of-the-art knowledge to future builders of the nation.

1. Computational Industrial Engineering
2. Human Resource's Skill Development
3. Managerial Capabilities Inculcation
4. High-tech Manufacturing Technology & Management
5. Quality, Productivity and Cost Effectiveness

On the core technology side, BSc in Industrial and Manufacturing Engineering offers a unique opportunity for students to learn classical production technologies in courses like Workshop Technology, Manufacturing Processes, Metrology and Metal Forming & Cutting Analysis. The high-tech courses embed the capabilities in students to learn and acquire modern production systems in courses like CAD/CAM,

Innovative Manufacturing Systems, Industrial Automation, Robotics and Computer Integrated Manufacturing. Soft technologies encompassing Statistical Analysis, Economics, Optimization and Simulation Modelling courses prepare students to design and build large and complex systems for efficiency and effectiveness. Moreover, strong emphasis has been ensured to inculcate managerial capabilities in industrial engineering students by including a host of courses in management electives.

Rich industrial neighbourhood around the University offers prospective industrial engineering students an ideal environment to groom their professional skills. These industries include HMC, HIT, POF, KSB, TIP, PAF complex at Kamra, BESTWAY Cement and a host of SME's in nearby Hattar Industrial Estate.

Laboratories and Other Facilities

The department has seven laboratories and a fully functional workshop.

1. Industrial Automation and Control
2. Computer Integrated Manufacturing
3. Human Factors and Safety
4. Management System Modeling and Simulation
5. Machining Precision and Metrology
6. Machine Tool and Machining
7. Management System Planning & Design
8. Workshops

Industrial Automation and Control Lab is equipped with industrial process fault finder, data acquisition and micro-controllers. Computer integrated manufacturing lab is equipped with state-of-the-art CIM (Intellitek) equipment. Human Factors and Occupational Safety lab consisting of treadmill, weighing scale, pin boards, sound meters, light meter, spectra light meter and various analysis tools with RULA software. Management System, Modeling and Simulation lab is equipped with modern software like TORA, LINGO, SIMU, ARENA (Student version), Expert Choice, Primavera, Pro Engineering, Minitab, CATIA, Python and other related software.

The Machining Precision and Metrology lab is equipped with basic to intermediate level equipment to teach the students. Machine Tool and Machining Laboratory consists of Denford machining suit, Boxford, Intellitek milling centers, ZCorp Rapid Prototyping and automation modules.

Courses Under Semester System
BSc Industrial & Manufacturing Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
HU-101	English I (Communication skills/Business skills)	2	1
IE-111	Data Analytics	1	1
IE-112	Workshop Practice	1	1
IE-113	Engineering Drawing and Graphics	2	1
NS-101	Probability and Statistics	3	0
NS-102	Calculus	3	0
	Total	12	4
	Semester Total	**16**	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
HU-102	Logic and Critical Thinking	2	0
NS-103	Differential Equations	3	0
IE-114	Mechanical Technology	2	1
HU-103	Islamic Studies/Ethics	2	0
CS-101	Introduction to Computing	2	1
CS-102	Computer Aided Design and Modeling	2	1
	Total	13	3
	Semester Total	**16**	
	Total for First Year	**32**	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
HU-202	Pakistan Studies	2	0
HU-201	Technical writing skills	2	1
IE-211	Engineering Mechanics	2	1
NS-201	Applied Physics	2	1
IE-212	Materials Engineering	2	1
NS-202	Applied Linear Algebra	3	1
	Total	13	5
	Semester Total	**18**	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
NS-203	Numerical Analysis	3	0
IE-213	Operations Research	3	1
IE-214	Manufacturing processes	3	1
IE-215	Mechanics of Materials	2	1
NS-204	Industrial electronics	2	1
	Total	13	4
	Semester Total	**17**	
	Total for Second Year	**35**	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
IE-311	Operations of Manufacturing Systems	2	1
IE-312	Applied Machine Design & FEM	2	1
IE-313	Metrology & Statistical Quality Control	3	1
IE-314	Optimization Techniques	2	1
IE-315	Work Study & Methods Engineering	3	1
	Total	**12**	**5**
	Semester Total	**17**	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
IE-316	Industrial Simulation	2	1
IE-317	Human Factors Engineering	2	1
IE-321	Management of Engineering Projects	2	1
HU-301	Engineering Economics	3	0
IE-318	Planning and Scheduling in Manufacturing	2	0
IE-319	Industrial Automation and Control	2	1
	Total	**13**	**4**
	Semester Total	**17**	
	Total for Third Year	**34**	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
IE-411	Design of Experiments	3	1
IE-412	Industrial Facilities Design	2	1
IE-XXX	Elective I*	3	1
IE-XXX	Elective II**	3	0
IE-491	Project Phase I	0	3
	Total	**11**	**6**
	Semester Total	**17**	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
IE-436	Supply Chain and Logistics Management	3	0
IE-XXX	Elective II**	2	1
IE-XXX	Elective I*	2	1
IE-XXX	Elective II**	3	0
IE-492	Project Phase II	0	3
	Total	**10**	**5**
	Semester Total	**15**	
	Total for Fourth Year	**32**	
	Total for Third Year	**133**	

*Manufacturing Track

** Systems Engineering/Management Track

Electives (Manufacturing Track)

Course Code	Course Title	Credit Hours	
		Theory	Lab.
IE-413	CAD/CAM	2	1
IE-414	Process planning and Lean Systems	3	0
IE-415	Smart Manufacturing	2	1
IE-416	Metal Forming & Cutting Analysis	3	1
IE-417	Tool & Die Design	2	1
IE-418	Feed Back & Control	2	1
IE-419	Total Quality Management	2	1
IE-420	Optimization via Simulation	2	1
IE-421	Maintenance & Reliability Analysis	3	0
IE-422	Special Topics	3	0
IE-423	Productivity Improvement Tools & Techniques	3	0
IE-424	Product Development & Concurrent Engineering	3	0
IE-425	Modeling & Analysis of Manufacturing Systems	3	0
IE-426	Contemporary issues in Industrial Manufacturing Engineering	3	0

Electives (Systems Engineering/Management Track)

Course Code	Course Title	Credit Hours	
		Theory	Lab.
IE-427	Marketing Management	3	0
IE-428	Human Resource Management	3	0
IE-429	Financial Management	2	1
IE-430	Quantitative & Qualitative Decision Making	3	0
IE-431	Knowledge management	3	0
IE-432	Management Information System	2	1
IE-433	Organizational Behavior	3	0
IE-434	Soft Computing & Data Mining	2	1
IE-435	Production & Operation Management	3	0
IE-437	Special Topics	3	0
IE-438	Expert System Applications	3	0
IE-439	Occupational Health & Safety	2	1
IE-440	Professional Engineering practices	3	0
IE-441	Artificial Intelligence	3	0
IE-442	Industrial Ecology and Sustainable Engineering	2	0
IE-443	Responsibilities of Engineers in society	2	0
IE-444	International Management Systems and Standards	2	0
IE-445	Risk Management	2	0

Note:
Theory and Lab courses are treated as separate courses.

5 Faculty of Telecommunication and Information Engineering

This faculty consists of four degree awarding departments:

- Department of Computer Engineering
- Department of Software Engineering
- Department of Telecommunication Engineering
- Department of Computer Science

DEPARTMENT OF COMPUTER ENGINEERING

Chairman

Prof. Dr. Hafiz Adnan Habib

Professors

Dr. Hafiz Adnan Habib
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Muhammad Haroon Yousaf
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Associate Professors

Dr. Muhammad Majid
BSc Eng. (UET, Taxila)
MSc Eng. (Sheffield, UK)
PhD (Sheffield, UK)

Dr. Farhan Qamar
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Assistant Professors

Dr. Muhammad Rizwan
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Malik Muhammad Asim
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Dr. Fawad Hussain
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Sana Ziafat
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Afshan Jamil
BSc Eng. (UET, Taxila) (Gold Medalist)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Naveed Khan Baloch
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Waqar Ahmad
BSc Eng. (CIIT, Abbottabad)
MSc Eng. (UET, Taxila)
PhD (POLITO, Italy)

Dr. Abdul Rehman Chaudhry
BSc Eng. (UET, Taxila)
MSc Eng. (LUMS, Lahore)
PhD (LUMS, Lahore)

Dr. Romana Shahzadi
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Muhammad Asif Khan
BSc. Eng. (UET, Taxila)
MSc Eng. (Petronas, Malaysia)
PhD (Petronas, Malaysia)

Lecturers

Engr. Mona Zafar
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Dr. Noshina Ishaque
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Asim Raza
BSc Eng. (CIIT Wah)
MSc Eng. (UET, Taxila)

Dr. Asim Raheel
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Dr. Sanay Muhammad Umar Saeed
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Sharoon Saleem
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Muhammad Tariq Javed
BSc. Eng. (CIIT, Wah)
MSc Eng. (UET, Taxila)

Dr. Zahid Mehmood
BSc Eng. (COMSATS, Islamabad)
MSc Eng. (IIU, Islamabad)
PhD (UET, Taxila)

Lab Engineers

Engr. Usman Rauf
BSc Eng. (CIIT, Wah)
MSc Eng. (Sweden)

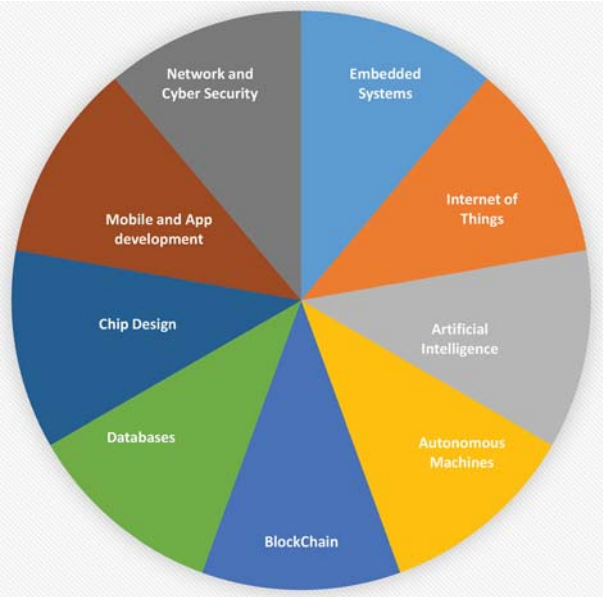
Introduction

Computer Engineering refers to the development of hardware and software needed for functional computers. These computer systems may vary in physical size, capabilities, computational powers, and interfaces, depending upon the application or service they are involved in. These computing systems are now serving in homes, offices, industries, banks, and everywhere as embedded systems, internet of things, cloud computing systems, workstations, etc. Computer Engineers are playing important role in the advancements in the fields of autonomous driving, home automation, industry 4.0, environment monitoring, health care, robotics, etc. Computer engineers are expected to have tremendous job opportunities in Pakistan as well as international jobs market as hardware engineers, software engineers, embedded system engineers, artificial intelligence engineers, IOT engineers, robotics, etc. The department offers training that prepares students for the international job market. Students are given technical knowledge to practice as a computer engineers. The department also focuses on the development of soft skills among students for success in their carrier. Entrepreneurship and business skills are also developed among students enabling them to have their startups and businesses.

Intensive hands-on experience:

Intensive hands or experience is offered to students to master the skills taught during this degree program. Students are required to develop projects in almost every technical course. On average students will be developing 30 projects during this degree program. Students will further develop one final year project to solve some bigger problem based-on technical skills acquired by these development projects. Students will be offered latest development tools to work on these projects for four years. The experience of using the latest development tools prepares students for the international jobs market.

Additionally, the department has adopted industry-developed curriculums for lab work subjects. Intel, NVIDIA, AND XILINX have developed a curriculum for the lab work of university students.



They give development tools to the universities. The students get experience with these tools, and it helps our students to get jobs in the international market.

The Department

Computer engineering degree program was started in year 2001 with an intake of fifty students. Initially, it was setup in the building of Electrical Engineering Department and classes were conducted in evening session only. In the meantime, construction of a separate building for the department worth Rs. 40 million with funding from HEC (Higher Education Commission) was started, which completed in year 2006. Building comprises of two floors out of which ground floor is for Computer Engineering Department. This floor has four class rooms, five labs, one examination hall, twenty five offices and other utility rooms. Department has five laboratories with sufficient hardware and computing facilities for practical work. All labs

are provided with high speed network and the department also has Wi-Fi coverage for internet connectivity in general. Computer engineering department also arranges various events in order to encourage students to take part in those events and groom their technical as well as social skills.

Program Educational Objectives (PEOs)

Graduates of the Computer Engineering Program are expected to have:

PEO-1: Necessary background and technical skills to analyze problems and design solutions in domains like embedded systems, computer-aided systems, system administration, and integration.

PEO-2: Ability to practice computer engineering skills to serve local and global industries and organizations as consultants and entrepreneurs.

PEO-3: Success with awareness and commitment to their ethical and social responsibilities, both as individuals and in team environments

PEO-4: Capability of maintaining and improving their technical competence through advanced degree programs in engineering and other professionally related fields.

Laboratories

The department has the following Labs;

1- SWARM Robotics
2- Electronic Systems
3- Data Communication & Networking
4- Computing
5- Digital Systems
6- Video and Image Processing

Swarm Robotics lab:
Swarm Robotics Lab is one of the HEC-funded labs under the National Centre for Robotics and Automation (NCRA). NCRA is a consortium of 11 labs over 13 universities in Pakistan with its headquarters at NUST College of E&ME. NCRA has been inaugurated in NUST College of E&ME by Prof. Ahsan Iqbal (Minister Planning, Development, and Reforms) on May 23, 2018. Swarm Robotics lab @ UET, Taxila is having funding of approximately 79 million PKR.

To establish a scaling solution for NCRA by providing an application agnostic swarm intelligence platform. The lab is composed of three sub-labs, i.e., Swarm Intelligence Lab, Computer Vision and AI Lab, and Decentralized Communications Lab.

The most important aspect of this lab would be to generate a generic scaling solution

that would work for any kind of application that can benefit from a multi-agent robotic system optimally. Such an undertaking will be achieved using state-of-the-art swarm intelligence algorithms.

Electronic system:
The electronic system lab contains specialized hardware in electrical and electronics engineering which comprises twenty workstations. Lab offers services in the courses of electronic circuit, circuit analysis, and digital logic design. It also helps to understand the core concepts of electronics used for robotics design and development. All sessions can access the resources in the lab for the term project and final year projects.

Data communication and networking:
Data Communication and networking lab is equipped with CISCO-sponsored network-related hardware along with 40 Dell-760 computing machines. The lab is also providing vibrant services as CISCO local academy. Lab offers services in the areas of computer communication and networks. This lab prepares the students for future cyber security challenges and jobs.

Computing Lab:
The computing lab is equipped with the latest forty HP Prodesk-400 Computing machines. Lab offers services for core computing areas e.g., computer fundamentals programming database management systems, OOP and data structures, and algorithms and planning to offer advanced courses like Blockchain technologies.

Digital systems Lab:
The digital system lab contains specialized hardware in the domain of digital system design. The lab is equipped with microcontroller kits (80C51, PIC-18, and AVR series) and FPGA Kits. This lab is also equipped with twenty Dell Optiplex-790 machines. Digital Systems Lab offers courses in microprocessor & interfacing, microcomputer systems, VLSI systems, and digital systems design. Hardware equipment can be utilized for edge computing, IoT, mapping of machine learning and AI algorithms into the hardware and utilizing the TinyML with ESP-32 microcontrollers.

Video and image processing Lab:
The video and image processing lab was established as a project funded by Higher Education Commission Pakistan. The lab is equipped with state-of-the-art equipment for video and image processing. This lab offers services in the areas of signals and image processing and computer vision. This Lab is dedicated to final year projects.

Technical Societies in the Department

Technical societies are established in the department that serves guidelines for the students to choose their profession after completion of their degree. Students entering the first semester are given orientation about these societies so that they can later join these societies to have technical grooming. The major objective of these technical societies is to develop strong interaction among the students and faculty in their corresponding areas of interest. Computer Engineering students have been divided into three categories for this reason. Scholars from undergraduate and postgraduate programs and members of the faculty share their work. Each society is headed by specialists in the respective area from the faculty. Other faculty members also coordinate. One student is also selected as the student chair for each society.

Taxalian Robotics & Automation Club (TRAC)

Society Counselor:
Dr. Naveed Khan Baloch

Through the primary research, it was established that the Industrial Robotics Market was valued approximately **USD 41.7 Billion** in **2021** and is projected to reach to roughly **USD 81.4 Billion** by **2028**. Taxilian Robotics and Automation Club is also known as TRAC is a technical society working purely in the domain of **Robotics**, **IoT, Automation**, **Software**, and **interpersonal development**. We aim to empower our students, provide them with a proper platform and resources and guide them so they can practice and polish their skills. TRAC has its own Women Empowerment Wing known as ***WEW*** for female students. The purpose of this wing is to let the female students have comfortable learning and work environment.

Our goal is to make our students able to learn a diverse skill set and to enable them to support themselves financially in their academic as well as a professional career. TRAC has developed many collaborations with national industries and other academic institutes to spread the knowledge and transform the people.

Elance Phantom

Society Counselor:
Dr. Fawad Hussain

The global e-commerce market size was valued at USD 9.09 trillion in 2019 and is expected to grow at a compound annual growth rate (CAGR) of 14.7% from 2020 to 2027. Elance

Phantoms aim to provide students with an opportunity to learn various web skills and gain high-level expertise to be self-employed and boss. We aspire to become the university's learning-intensive society/ platform and evolve as the leading community for students' betterment by making them skillful. Keeping in view the high demand for various web skills (e.g., e-commerce, graphics designing, web development, digital marketing, etc.), the Department of Computer Engineering took the initiative to start the society, named "ELANCE PHANTOMS," on campus to provide awareness as well as training to students on various web skills on demand. Following are the further details regarding the upcoming event.

The society is collaborating with eCommerce Success Pakistan (ESP) for future endeavors, and this is one of the well-known groups of Pakistan working in the domain of Ecommerce on Amazon. They are the pioneers in introducing the wholesale business model on Amazon in Pakistan. In addition to wholesale, they are also working on other variations of the Amazon eCommerce businesses like Etsy, drop shipping, etc. They are training thousands of students all around Pakistan, and we are proud to collaborate with them.

Artificial Intelligence R&D

Society Counselor:
Dr. Afshan Jamil

The global Artificial Intelligence (AI) market size was valued at **USD 328.34 billion** in **2021**. The market is projected to grow from **USD 387.45 billion** in **2022** to **USD 1,394.30 billion** by **2029**, exhibiting a **CAGR of 20.1%** during the forecast period. Artificial Intelligence (AI) today is a huge benefit to humanity because it boosts our efficiency and throughput, while creating new prospects for income generation, cost savings and job creation. Innovations in AI have opened new prospects for progress in critical areas such as health, finance, national security, education, energy, and the environment. In recent years, machines outperformed humans in performing certain specialized tasks, such as some aspects of image recognition. It is predicted by experts that rapid progress in

the field of artificial intelligence will continue. Though it is very implausible that machines will exhibit broadly applicable intelligence comparable to or beyond that of humans in the next 20 years, yet it is to be expected that machines will reach and surpass human performance on more and more tasks.

AIRD society will enable students to rethink how we integrate information, analyze data, and use the resulting insights to improve decision making, survey the current state of AI and its existing and potential applications. Students will get more opportunities to learn, experiment and explore. Surely the future of higher education is inherently linked with developments on new technologies.

Entrepreneurship:

The students are taught entrepreneurship and leadership. The department promotes students for entrepreneurship, provides guidance, and plans opportunities to pitch their startup ideas. University has set up a technology incubation center in collaboration with the Plan-9 program of the Punjab Information Technology Board. Two students' projects have been selected from Computer Engineering Department for incubation in this Plan-9 center at UET, Taxila.

Directorate of Undergraduate Studies

To manage academic activities in Computer Engineering Department UGS office works under supervision of the chairman. Scheduling of all academic and support activities such as registration, attendance records, placement of students in different industries for internship, examination, student study trips etc. are managed by this office. UGS office also arranges onsite job interviews to facilitate various employers, like IBM Pakistan, Arbisoft, AWC, PMO and PAEC etc. Industrial liaison and industry-academia collaboration at university level is also a function of UGS office.

Courses Under Semester System
BSc Computer Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-101	Computing Fundamentals	2	1
EE-102	Basic Electrical Engineering.	3	1
NS-103	Applied Physics	3	1
MA-104	Calculus & Analytical Geometry	3	0
HU-105	English Language Proficiency	3	0
	Total	14	3
	Semester Total	**17**	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-106	Digital Logic Design	3	1
CP-107	Computer Programming	3	1
EE-108	Circuit Analysis	3	1
MA-109	Linear Algebra & Differential Equations	3	0
HU-110	Islamic Studies	2	0
	Total	**14**	**3**
	Semester Total	**17**	
	Total for First Year	**34**	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-201	Computer Organization	3	0
CP-202	Data Structures & Algorithms	3	1
CP-203	Computer Applications in Engineering Design	2	1
EE-204	Electronic Circuits	3	1
MA-205	Complex Analysis and Transform Methods	3	0
	Total	**14**	**3**
	Semester Total	**17**	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-206	Object Oriented Programming	2	1
CP-207	Operating Systems	3	1
EE-208	Microprocessor and Interfacing	3	1
EE-209	Signals &Systems	3	0
MA-210	Discrete Structures	3	0
	Total	**14**	**3**
	Semester Total	**17**	
	Total for Second Year	**34**	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-301	Microcontroller System Design	3	1
CP-302	Computer Communication & Networks	3	1
CP-303	Digital Signal Processing	3	1
MA-304	Numerical Methods & Probability	3	0
HU-305	Business Communication & Report Writing	2	0
	Total	**14**	**3**
	Semester Total	**17**	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-306	Digital System Design	3	1
SE-307	Database Management Systems	3	1
HU-308	Pakistan Studies	2	0
CP-309	CEDE-I	3	1
CP-310	IDEE-I	3	0
	Total	**14**	**3**
	Semester Total	**17**	
	Total for Third Year	**34**	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-401	Preliminary Project Studies	0	2
MS-402	Computer Engineering Project Management	3	0
HU-403	Engineering Economics	2	0
HU-404	Professional Ethics	2	0
CP-405	CEDE-II	3	1
CP-406	IDEE-II	3	1
	Total	**13**	**4**
	Semester Total	**17**	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-407	Design Project	0	4
MS-408	Entrepreneurship & Leadership	2	0
MS-409	Management Information System	3	0
CP-411	IDEE-III	3	1
CP-410	CEDE-III	3	1
	Total	**11**	**6**
	Semester Total	**17**	
	Total for Final Year	**34**	
	Grand Total for Four Years	**136**	

Computer Engineering Depth Electives (CEDE)

Course Title	Credit Hours
Wireless and mobile networks (CEDE-1)	3+1
Digital Image Processing (CEDE-1)	3+1
Mobile application development (CEDE-2)	3+1
Parallel & Distributed Computing (CEDE-2)	3+1
VLSI System Design (CEDE-3)	3+1
System Programming (CEDE-3)	3+1

Inter-Disciplinary Engineering Electives (IDEE)

Course Title	Credit Hours
Advance Algorithms	3+0
Fault Tolerant Computing	3+0
Network Security & Cryptography	3+0
Data Warehousing & Mining	3+0
Control Engineering	3+1
Computer Graphics	3+1

Course Title	Credit Hours
Digital Communication	3+1
Robotics	3+1
Communication Systems	3+1
Software Quality Assurance	3+1
Machine Learning	3+1

Note:
Theory and Lab courses are treated as separate courses.

DEPARTMENT OF SOFTWARE ENGINEERING

Chairman

Prof. Dr. Tabassam Nawaz

Professor

Dr. Tabassam Nawaz
BSc Eng. (UET, Taxila)
MCS (BIIT, Rwp)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Associate Professor

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MSc Eng. (Sheffield, UK)
PhD (Sheffield. UK)
Post Doc (USA)

Dr. Ali Javed
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila), Gold Medalist
PhD (UET, Taxila & Uni. of Michigan, USA)
Post Doc. (Oakland Uni., USA)

Dr. Hassan Dawood
BSc Eng. (CIIT, Wah)
ME (BNU, China)
PhD (BNU, China)

Assistant Professors

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PhD (Australia)

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MS (NUST)
PhD (UET, Taxila)

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PhD (UET, Taxila)

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MSc Eng. (NUST, Islamabad)
PhD (UET, Taxila)

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MSc Eng. (UET, Taxila)

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MSc Eng. (UET, Taxila)
PhD (NUST Islamabad)

Lecturers

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BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UK)

Engr. Sahar Javaid
BSc Eng. (Hons., UET, Taxila)
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PhD (UET, Taxila)

Dr. Kanwal Yousaf
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MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Maria Andleeb
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Tehmina Kalsoom
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila) Gold Medal

Engr. Marriam Nawaz
BSc Eng. (UET, Taxila) Gold Medalist
MSc Eng. (UET, Taxila)

Lab Engineers

Engr. Nazia Bibi
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Sidra Shafi
BSc Eng. (Hons., UET, Taxila)
MS (NUST, Islamabad)

Engr. Rabia Arshad
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Saba Awan
BSc Eng. (Hons., UET, Taxila)
MSc Eng. (UET, Taxila)

The Department

Software Engineering degree Program was started in 2002. Initially, it was setup in Electrical Engineering Department and classes were conducted in evening session only. In the meantime, the construction of separate building for department worth Rs. 40 million with funding from HEC (Higher Education Commission) was completed in year 2006. Department is housed on first floor of the building which comprises of five classrooms, five labs, one girl's common room, one examination hall and fifteen offices. Department has laboratories with enough hardware and software facilities. Each lab is equipped with thirty PCs. These labs are networked, and the department has wireless network coverage as well.

Software engineering department organizes different events to encourage student's participation and to groom their technical as well as non-technical skills. The events that

have been arranged so far are programming exhibition (Term projects exhibition in JAVA, C# etc.), Database exhibitions, annual students' day, seminars, and workshops related to Software Engineering topics.

Program Mission

Delivering state-of-the-art knowledge and skills of Software Engineering to improve society.

Program Educational Objectives (PEOs)

The program aims to;

PEO 1. Train students to proficiently apply their knowledge and skills in diverse organizations.

PEO 2. Develop responsible and ethical professionals having strong interpersonal skills.

PEO 3. Enable students to become entrepreneurs, managers, and life-long learners.

Laboratories

There are following Labs in the department;

1. Software Engineering
2. Computer Graphics
3. DOT IT
4. Elementary Computer
5. Multimedia Signal Processing Research Lab

Software Engineering Laboratory provides general purpose computing facilities to the students of Software Engineering discipline. The lab is equipped with thirty computers with latest specifications and the state-of-the-art software tools and applications. This lab is fulfilling the requirements of courses related to software technologies, computer networks and internet technologies.

Computer Graphics Lab provides students a facility to conduct experiments related to Computer Graphics and visual programming courses of Software Engineering.

DOT IT Lab was solely constructed for research and development in the field of Databases, Web Engineering, Artificial Intelligence and Data mining.

Elementary Computer Lab is used for introductory courses including basic programming and computing. The lab is equipped with latest equipment and software to facilitate students.

Multimedia Signal Processing (MSP) Research Lab focuses on generating cutting-edge research results in the field of multimedia signal processing. The research at MSP group focuses on extracting useful information from the multimedia content to design various state-of-the-art computer vision, image and audio processing based mobile, web and desktop applications. The members at MSP research lab including both the postgraduate and undergraduate students also design various quality engineering frameworks to evaluate the performance of multimedia applications.

Placement Bureau & Industrial Liaison Office

A placement bureau has been established by the department to facilitate the placement of students in the industry. The Bureau communicates with public and private sector organizations and broadcast opportunities among the students. Interview arrangements are also made to facilitate employers. Industrial

liaison officer has been designated at departmental level who co-ordinates the process of internships for students and hence serves the purpose of industry-university linkage.

Societies

Societies are developed to bring out potential qualities of students and enhance their skills. The major objective of these societies is to develop strong interaction among the students and faculty in their corresponding field of interests.

Soft Desk
Advisor:
Dr. Ali Javed

Domain of software development is touching new heights for the past few years and software technologies are rapidly being developed and become obsolete within months. There is every need to keep an eye on changing trends in the field. For the above stated purpose, a society has been established in the Department of Software engineering named SOFT- DESK. The major achievement of SOFTDESK is to organize UET, Taxila Olympiad at National level where universities from all over Pakistan participate every year.

Software Technologies Incubation Centre (STIC)

Due to technological advancements in Software industry and to reduce the gap between academia and industry, Department of Software Engineering, UET, Taxila established Software Technologies Incubation Centre (STIC). STIC offered different workshops in networking field like Microsoft Certified System Engineer (MCSE-Microsoft Windows Server 2003), Microsoft Certified Information Technology Professional (MCITP-Microsoft Windows Server 2008), Microsoft Certified Solutions Associate (MCSA-Microsoft Windows Server 2012), LINUX Redhat Certified Engineer (RHCE), Cloud Computing/ Virtualization, Cisco Certified Network Associate (CCNA) and workshops in Software field like PHP, Wordpress, joomla, Magento, Andriod and Search Engine Optimization (SEO). After successful completion of these workshops, students can get best jobs either in Software field or in networking field.

Courses Under Semester System
BSc Software Engineering

Semester - I

Course Code	Course Title	CREDIT HOURS	
		Theory	Lab.
SE-101	Information and Communication Technologies	3	1
SE-102	Introduction to Software Engineering	3	0
MA-103	Calculus and Analytical Geometry	3	0
HU-104	Functional English	3	0
HU-105	Pakistan Studies	2	0
	Total	**14**	**1**
	Semester Total	**15**	

Semester - II

Course Code	Course Title	CREDIT HOURS	
		Theory	Lab.
MA-106	Applied Physics	3	0
SE-107	Discrete Structures	3	0
SE-108	Software Requirements Engineering	2	1
SE-109	Computer Programming	3	1
MA-110	Linear Algebra and Differential Equations	3	0
HU-111	Communication Skills	2	0
	Total	**16**	**2**
	Semester Total	**18**	
	Total for First Year	**33**	

Semester - III

Course Code	Course Title	CREDIT HOURS	
		Theory	Lab.
HU-201	Islamic Studies\Ethics	2	0
SE-202	Data Structures and Algorithm	3	1
MA-203	Numeric and Symbolic Computing	3	0
HU-204	Technical Writing and Presentation Skills	3	0
SE-205	Software Design & Architecture	3	1
	Total	**14**	**2**
	Semester Total	**16**	

Semester - IV

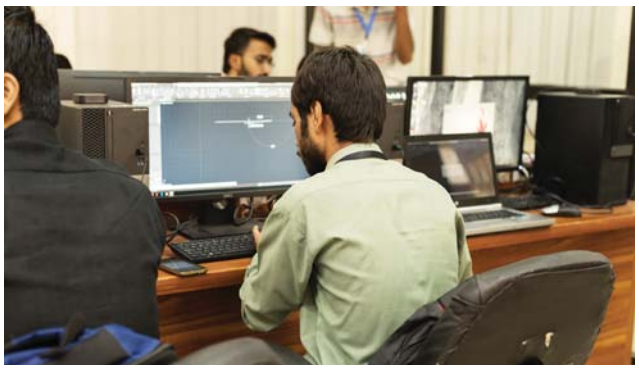
Course Code	Course Title	CREDIT HOURS	
		Theory	Lab.
MA-206	Probability and Statistics	3	0
SE-207	Object Oriented Programming	3	1
SE-208	Database Systems	3	1
SS-209	Engineering Economics	3	0
SE-210	Operating Systems	3	1
	Total	**15**	**3**
	Semester Total	**18**	
	Total for Second Year	**34**	

Semester - V

Course Code	Course Title	CREDIT HOURS	
		Theory	Lab.
SE-301	Software Quality Engineering	3	1
MG-302	Management and Marketing	3	0
SE-303	Formal Methods in Software Engineering	3	0
SE-304	Computer Networks	3	1
SE-305	Web Engineering	3	1
	Total	**15**	**3**
	Semester Total	**18**	

Semester - VI

Course Code	Course Title	CREDIT HOURS	
		Theory	Lab.
SE-306	Design and Analysis of Algorithms	3	0
SE-307	Software Construction & Development	2	1
SE-308	Digital Image Processing	3	1
SE-309	Embedded Systems	3	0
SE-XXX	SE Elective I	3	0
	Total	**14**	**2**
	Semester Total	**16**	
	Total for Third Year	**34**	



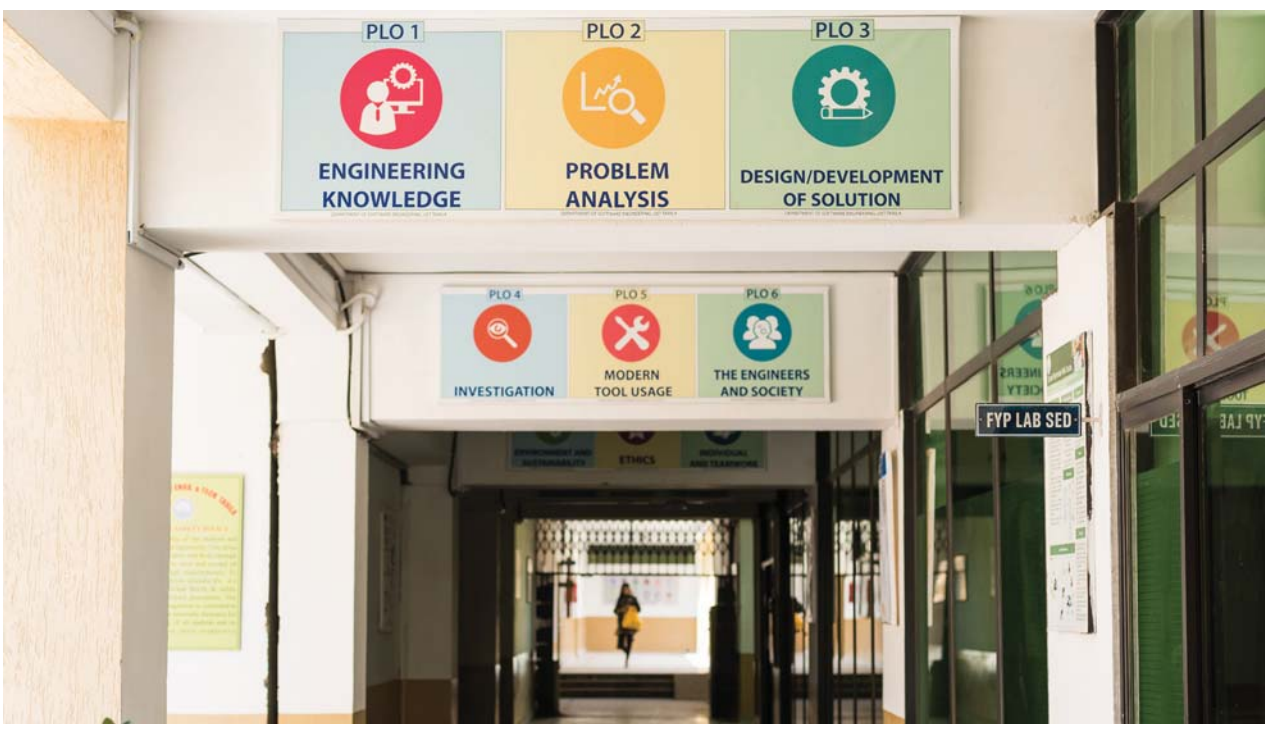
Semester - VII

Course Code	Course Title	CREDIT HOURS	
		Theory	Lab.
SE-401	Software Project Management	3	1
SE-402	Final Year Project-I	0	2
SE-403	Information Security	3	0
MG-404	Entrepreneurship and Leadership	3	0
SE-XXX	SE Elective II	3	0
SE-XXX	SE Elective III	3	0
	Total	**15**	**3**
	Semester Total	**18**	

Semester - VIII

Course Code	Course Title	CREDIT HOURS	
		Theory	Lab.
SE-405	Human Computer Interaction	3	0
SE-406	Final Year Project II	0	4
SS-407	Organizational Behavior	2	0
SE-XXX	SE Elective IV	3	0
SE-XXX	SE Elective V	3	0
	Total	**11**	**4**
	Semester Total	**15**	
	Total for Final Year	**33**	
	Grand Total for Four Years	**134**	

Note:
Theory and Lab courses are treated as separate courses.



SOFTWARE ENGINEERING (SE) ELECTIVE COURSES

Course Code	Course Title	Course Code	Course Title
X11	Software Testing	X33	Data Warehousing & Data Mining
X12	Real Time Systems	X34	Introduction to Bioinformatics
X13	Machine Learning	X35	Agent Based Software Engineering
X14	Computer Vision	X36	Big Data Analytics
X15	Wireless Networks	X37	Computer Graphics
X16	Advance Database Management System	X38	E-Commerce
X17	Enterprise System Engineering	X39	Game Application Development
X18	Data Security and Encryption	X40	Global Software Development
X19	Design Patterns	X41	Information Systems Audit
X20	Artificial Neural Networks	X42	Management Information Systems
X21	Software Metrics	X43	Mobile Application Development
X22	Business Process Automation	X44	Multimedia Communication
X23	Advance Software Technologies	X45	Natural Language Processing
X24	Automata Theory & Formal Languages	X46	Systems Programming
X25	Fault Tolerant and Survivable Systems	X47	Advanced Topics in Software Engineering
X26	Financial and E-Commerce Systems	X48	Deep Learning
X27	Multimedia Forensics	X49	High Performance Computing
X28	Semantic Web	X50	Artificial Intelligence
X29	Visual Programming	X51	Social Network Analysis
X30	Multimedia Systems	X52	Data visualization
X31	Compiler Construction	X53	Internet of things
X32	Advance Operating Systems	X54	Distributed and Cloud Computing

X denotes 3 or 4

DEPARTMENT OF TELECOMMUNICATION ENGINEERING

Chairman

Prof. Dr. Yasar Amin

Professors

Dr. Adeel Akram
BSc Eng. (UET, Lahore)
MSc Eng. (NUST)
PhD (UET, Taxila)
(on Deputation)

Dr. Yasar Amin
BSc Eng. (UET, Taxila)
MSc Eng. (KTH, Sweden)
PhD (KTH, Sweden)
MBA (UTU, Finland)

Associate Professors

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MSc Eng. (NTU, Singapore)
PhD (UET, Taxila)

Dr. Abdul Basit
BSc Eng. (NU-FAST Islamabad)
MSc Eng. (UET, Taxila)
PhD (UESTC, China)

Dr. Rashid Saleem
BSc Eng. (GIKI Topi)
MSc Eng. (UET, Taxila)
PhD (Uni. of Manchester, UK)

Assistant Professors

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BSc Eng. (UET, Taxila)
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PhD (UET, Taxila)

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MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

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PhD (UET, Taxila)

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PhD (NUST, Islamabad)

Dr. Muhammad Ali Riaz
BSc Eng. (Iowa State Univ., USA)
MSc Eng. (Iowa State Univ., USA)
PhD (UET, Taxila)

Engr. Mohsin Niaz
BSc Eng. (UET, Taxila)
MSc Eng. (CUT, Sweden)

Dr. Ali Waqar Azim
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MSc Eng. (Politecnico di Torino, Italy)
PhD (Uni. of Grenoble Alpes, France)

Lecturers

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MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

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BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Dr. Asma Ejaz
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)
PhD (UET, Taxila)

Engr. Iqra Jabeen
BSc Eng. (UET, Taxila)
MSc Eng. (UET, Taxila)

Engr. Muhammad Zahid
BSc Eng. (Islamia Uni. Bahawalpur)
MSc Eng. (HITEC University)

Dr. M. Zeeshan Sarwar
BSc Eng. (UET, Taxila)
MSc Eng. (Iqra Uni. Islamabad)
PhD (University of Wollongong, Australia)

Engr. Aasma Shafi Randhawa
BSc Eng. (GC Uni, FSD)
MSc Eng. (UET, Taxila)

Engr. Sadaf Talha
BSc Eng. (UET, Taxila)
MSc Eng. (NUST, Islamabad)

Lab Engineers

Engr. Faisal Shehzad
BSc Eng. (FAST)
MSc Eng. (UET, Taxila)

Introduction

After the successful implementation of globalization, privatization and liberalization, the importance of telecommunication has increased significantly. Telecommunication services have emerged as central issue. Digital technology that integrates transmission, switching, processing, and retrieval of information provides opportunities to merge various service modes into an integrated unit. Satellites and optical fibers, among other technologies, contribute significantly to the globalization of telecommunications services. Standardization and interoperability of system have become global issues, as have compatibility of regulatory measures that ensure free trade in telecommunication products and services.

The Department

Established in 2007, Telecommunication Engineering department is concerned with the theory, development and application of telecommunication systems, their design and integration. The objective of

the program is to provide students with a strong theoretical and practical background in the field of telecommunication along with the engineering analysis, design, and implementation skills necessary to work between the two. The department offers 4 years degree program of BSc Telecommunication Engineering.

Program Vision

To foster innovation, excellence, and access at different levels of education for the telecommunication engineering profession.

Program Mission

To cultivate industry focused human resource that benefits the global demand of Telecommunication industry by:

- Providing value-added education through driven and qualified faculty
- Upholding a supportive environment for imparting affordable education
- Stimulating industry-academia linkage by industry involvement and entrepreneurial activities.

Program Educational Objectives (PEOs)

PEO-1: Our engineers will pursue professions in public or private sector industry, R&D organizations or initiate their own business. Some of them may opt to seek higher professional education.
PEO-2: They will exhibit the capability to remain abreast of recent development in Telecommunication Engineering.
PEO-3: Their dealings and behavior will reflect sound morals and sensitivity towards socio-environmental concerns.
PEO-4: They will have the capacity to be leaders in their respective organizations.

Laboratories

At present, Department of Telecommunication Engineering has six laboratories for practical demonstration and research work graduates. The semester projects associated with courses taught are carried out in the same laboratories. These laboratories are equipped with high quality equipment to provide students with hands-on training. There are following labs in the department;

1. Electronics & Communication Systems
2. Antenna and Microwave
3. Redio Frequency (RF)
4. DSP and Microprocessor
5. Virtual Reality & Simulation Systems
6. Telecommunication Innovation Center
7. Embedded Systems Research & Development Center

Electronics and Communication Systems Lab is basically developed for experiment of subjects like Electronic devices and circuits, digital logic design, circuit analysis and amplifiers and oscillators etc. This lab is equipped with latest equipment and all required software packages for simulation process.

Antenna and Microwave lab is basically developed for the subjects like Antennas & Wave propagation and Microwave Engineering. The lab is equipped with latest equipment and all required software packages used for simulation purposes.

The purpose of RF lab is conducting the practical work subject like RF planning. The lab also provides the fabrication and testing facility for Antennas and RFID tags. This lab is equipped with all the necessary hardware and software facilities.

The purpose of DSP and Microprocessor lab is to conduct lab experiments for Digital Signal Processing and Micro- processors and Interfacing techniques. This lab is equipped with all the necessary hardware and software facilities.

The Virtual Reality Simulation Laboratory (VRS Lab) is a research laboratory of the Department of Telecommunication Engineering. The research activities are mainly focused on Virtual and Augmented Reality Technologies in Automotive, Behavioral sciences and education. The VRS Lab is also engaged in the design and development of advanced human machine interface.

Telecommunication Innovation Center has been established with collaboration of Telecom industry to equip the TED with state-of-the-art equipment and infrastructure. The equipment donated by industry is in practice and functional. Transmission & Switching Systems Lab is conducted over here.

Embedded Systems Research & Development Center has been developed to carryout design and synthesis of VLSI systems and advanced level packaging. The lab also hosts a broad spectrum of engineering simulation and scientific computing software. The labs that are conducted here are optical fiber communication, Operating Systems, Introduction to Computing, VLSI Systems, Object Oriented Programming, Control Systems, Computer Aided Engineering Drawing, Next Generation Networks and Radar Systems Engineering.

Courses Under Semester System
BSc Telecommunication Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
HU-101	Functional English	3	0
CS-102	Information and Communication Technology	2	0
CS-102 (L)	Information and Communication Technology	0	1
MA-103	Calculus and Analytic Geometry	3	0
EE-104	Circuit Analysis	3	0
EE-104 (L)	Circuit Analysis	0	1
MA-105	Applied Physics	3	0
MA-105 (L)	Applied Physics	0	1
EE-106 (L)	Electric Workshop	0	1
	Total	**14**	**4**
	Semester Total	**18**	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
HU-107	Communication Skills	3	0
CS-108	Object Oriented Programming	3	0
CS-108 (L)	Object Oriented Programming	0	1
EE-109	Electrical Network Analysis	3	0
EE-109 (L)	Electrical Network Analysis	0	1
MA-192	Differential Equations	3	0
IE-122 (L)	Computer Aided Engineering Design	0	1
HU-112	Islamic Studies and Ethics	2	0
	Total	**14**	**3**
	Semester Total	**17**	
	Total for First Year	**35**	

Semester - Iii

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EE-203	Electronic Devices and Circuits	3	0
EE-203 (L)	Electronic Devices and Circuits	0	1
MA-205	Multivariable Calculus	3	0
HU-205	Pakistan Studies and Global Perspectives	2	0
MDE-Elective 1	2	0	1
MDE-Elective 1	0	1	0
HU-405	Engineering Economics	3	0
MA-206	Linear Algebra	3	0
	Total	**16**	**2**
	Semester Total	**18**	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
TE-207	Probability and Statistics	3	0
EE-208	Amplifiers and Oscillators	3	0
EE-208 (L)	Amplifiers and Oscillators	0	1
EE-209	Signals and Systems	3	0
EE-209 (L)	Signals and Systems	0	1
EE-210	Digital Logic Design	3	0
EE-210 (L)	Digital Logic Design	0	1
HU-305	Technical Report Writing and Presentation	3	0
	Total	**15**	**3**
	Semester Total	**18**	
	Total for Second Year	**36**	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
TE-301	Electromagnetic Theory	3	0
TE-303	Communication Systems	3	0
TE-303 (L)	Communication Systems	0	1
EE-302	Control Systems	2	0
EE-302 (L)	Control Systems	0	1
CS-304	Computer Communication Networks	3	0
CS-304 (L)	Computer Communication Networks	0	1
TE-309	Microprocessors and Microcontrollers	3	0
TE-309 (L)	Microprocessors and Microcontrollers	0	1
	Total	**14**	**4**
	Semester Total	**18**	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
TE-306	Digital Communications	3	0
TE-306 (L)	Digital Communications	0	1
TE-307	Antennas and Wave Propagation	3	0
TE-307 (L)	Antennas and Wave Propagation	0	1
TE-308	Wireless and Mobile Communications	3	0
TE-304	Digital Signal Processing	3	0
TE-304 (L)	Digital Signal Processing	0	1
	MDE-II	3	0
	Total	**15**	**3**
	Semester Total	**18**	
	Total for Third Year	**36**	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
TE-401	Microwave Engineering	3	0
TE-401 (L)	Microwave Engineering	0	1
TE-402	Optical Fiber Communications	3	0
TE-402 (L)	Optical Fiber Communications	0	1
	MBC Depth Elective I	3	0
TE-403	Final Year Design Project I	3	0
MG-407	Entrepreneurship	3	0
	Total	**15**	**2**
	Semester Total	**17**	

Semester - VIII

	Course Code	Course Title	Credit Hours	
			Theory	Lab.
1	TE-405	Transmission and Switching Systems	3	0
2	TE-405 (L)	Transmission and Switching Systems	0	1
3	TE-406	Final Year Design Project II	3	0
4	HU-404	Professional Practices	3	0
5		Social Science Elective	3	0
6		MBC Depth Elective II	3	0
		Total	**15**	**1**
		Semester Total	**16**	
		Total for Fourth Year	**33**	

Major Based Core (MBC) Depth Electives

Course Code	Course Title
TE-408	Multimedia Systems
TE-409	Digital Electronics
TE-410	Digital Image Processing
TE-411	Satellite Communications
TE-412	Telecommunication Standards and Regulations
TE-413	Telecommunication Traffic Engineering
TE-414	Spread Spectrum Communications
TE-415	Speech Processing
TE-416	Next Generation Networks
TE-417	Network Security
TE-418	Broadband Communication Networks
TE-419	Radar Systems and Remote Sensing
TE-420	Telecommunication Network Management
TE-421	Compression Techniques
TE-422	Telecommunication Systems
TE-423	Machine Learning for Communication Systems
TE-424	Emerging Wireless Technologies and RF Planning Multi-disciplinary Electives

Note:

Theory and Lab courses are treated as separate courses.

Multi-Disciplinary Electives (MDE)

Course Code	Course Title
EE-211	Numerical Methods in Engineering
CS-212	Operating Systems
CS-213	Data Structures and Algorithms
CS-214	Database Management Systems
EE-422	Embedded Systems
CS-423	Artificial Intelligence
TE-424	Reliability, Modelling and Simulation of Telecommunication Systems
EE-425	VLSI Systems
CS-425	Data Science
CS-427	Cyber Security
CS-428	Cloud Computing
CS-429	Internet of Things Social Science Electives

Social Science Electives

Course Code	Course Title
MG-422	Organisation Behaviour
HU-423	Psychology
HU-424	Public Policy
HU-425	Sociology
HU-426	Political Science
HU-427	Pakistani Culture and Society
HU-428	Sociology/ Community Service

DEPARTMENT OF COMPUTER SCIENCE

Chairman

Dr. Syed Aun Irtaza

Associate Professors

Dr. Syed Aun Irtaza
BSCS (AIOU Islamabad)
MSCS (FAST-NU, Islamabad)
PhD (FAST-NU, Islamabad)
Post Doc (Univ. of Michigan, USA)

Assistant Professors

Dr. Muhammad Munawar Iqbal
BSc (IU Bahawalpur)
MSc (PU Lahore), MSCS (COMSATS Islamabad)
PhD (UET, Lahore)

Dr. Farrukh Zeeshan Khan
B.Com (PU Lahore), MCS (IU Bahawalpur)
PhD (Vienna Univ. of Tech., Austria)

Dr. Zeeshan Iqbal
BSc (IU Bahawalpur)
MSc (PU Lahore), MSCS (COMSATS, Islamabad)
PhD (UET, Taxila)

Dr. Syed Muhammad Adnan Shah
BSc (PU Lahore)
MSc Computer Eng. (CASE Islamabad)
PhD (UET, Taxila)

Dr. Muhammad Javed Iqbal
BSCS (BZU Multan)
MSCS (UA Faisalabad)
PhD (UTP, Malaysia)

Dr. Qamas Gul
BSCS (AIOU, Islamabad)
MSc Eng. (UET, Taxila)
PhD (BIT, China)

Lecturers

Dr. Rao Wakeel Ahmad
BCS (PU Lahore)
MCS (UO Sargodha)
MSIT (NUST SEECS, Islamabad)
PhD (UET, Taxila)

Dr. Abid Rauf
BSc Math (PU Lahore)
MS Info. Security (SU, Chengdu, China)
PhD (NUST, Islamabad)

Dr. Rashid Amin
BSc Math (BZU, Multan)
MCS (IIU, Islamabad)
PhD (COMSATS, Wah Cantt.)

Mr. Mehmoon Anwar
BSc Math (PU, Lahore)
MS Info. Tech. (QU, Islamabad)
MSCS (IIU, Islamabad)

Ms. Rabia Mahum
MSCS (UET, Taxila)

Mr. Hasnat Ahmed
MSCS (IIU, Islamabad)

Ms. Asmia Asmial
MSCS (IIU, Islamabad)

The Department

The Department of Computer Science is offering BS Computer Science, MS Computer Science, MS Data Science, and PhD Computer Science programs.

Computer science is a field that combines scientific principles and practical applications to solve computational problems. Computer scientists specialize in designing and developing computational systems, as well as studying the theory of computation. Pursuing a degree in computer science offers a wide range of career opportunities with competitive salaries worldwide.

The impact of computer science has been felt across all aspects of human life, from personal to business. With the evolution of computing, new mechanisms and services have been created, providing numerous job opportunities for computer scientists. Top careers in this field include Software Development, Data Science, Data Engineering, Cloud Computing Experts, Database Administration, Business Intelligence, Android/IOS Application Development, Game Programming, Artificial Intelligence Engineers, and Cyber Security.

To ensure that students are prepared for the demands of the international job market, computer science department in UET Taxila has focused on the latest job trends in the field. The primary objective is to equip students with high-demand skills required to persue the career in the field of Computer Science.

The department also collaborates with leading companies in the computer science industry, such as Cloudera, Oracle, VMWare, Huawei, Amazon Web Services, SAP, and Microsoft. These partnerships provide students with an industry-developed curriculum and exposure to software being used in the industry, enhancing their job readiness upon graduation. The department's academic partnerships reflect its commitment to staying current with industry standards and equipping its students with the skills needed to excel in their future careers.

Program Mission

Imparting up-to-date knowledge and skills of Computer Science to achieve the socio-economic goals for the betterment of society.

Program Educational Objectives (POEs)

The Program aims:

PEO-1: To produce competent computer scientists that can apply the knowledge and skills of computer science in diverse fields.

PEO-2: To prepare students to demonstrate professional and ethical practices and a responsible behavior in their respective organization.

PEO-3: To inculcate a zest to enhance their professional development by pursuing advance degrees in their fields.

PEO-4: To impart interpersonal skills so that they can become successful managers, entrepreneurs, and leaders.

Laboratories

There are following labs in the department:

1. General Computing
2. Cloud Computing
3. Digital Logic Design
4. Final Year Project

The General Computing lab serves as a multipurpose facility for students to conduct experiments in computer programming, web development, and mobile application development.

In contrast, Cloud computing provides on-demand access to shared computer processing resources and data via the Internet, reducing the need to store data locally and potentially cutting costs.

The Digital Logic Design Lab features top-of-the-line hardware and software to enable students to perform necessary experiments.

Similarly, the Final Year Project Lab is a dedicated space that supports students in designing, developing, completing, and testing their final year projects.

COMPTECH (Society of Computer Technology)

Advisor:
Dr. Muhammad Munwar Iqbal (Assistant Professor)
Patron:
Dr. Syed Aun Irtiza

Society Mission & Objectives

- To invite the speakers from all over Pakistan, so they can guide the students in their respective fields.
- To provide the chance to collaborate with international computing and scientific societies.
- To able participation in the competitions being held by other institutions, and international hackathons.
- To organize Extra Curricular activities and events for the Students to foster their intellectual, and literary potentials.

Events Organized

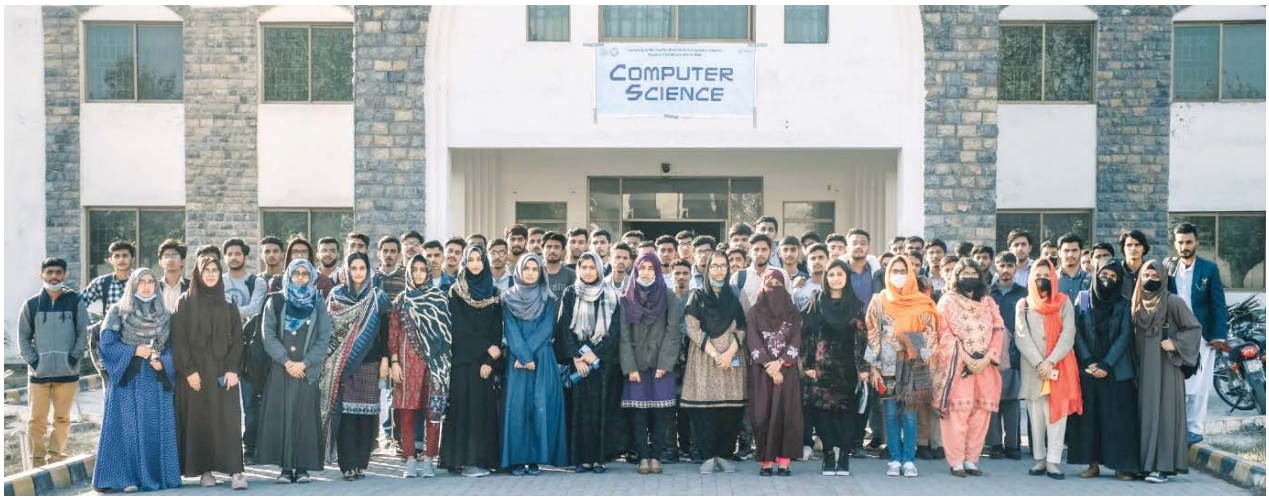
1. Web Programming
2. Poster Design
3. Crypto Challenge/Cryptography
4. UNO Card Game
5. Rubik's Cube
6. Minute to Win it
7. Quick Coding

Courses of Study

To complete the BS Computer Science degree:

1) The minimum credit hours shall be 134 including computing related courses.
2) The program shall comprise 8 semesters spread over 4 year with two semesters a year.

In all matters regarding courses of study and others, the department strictly follows the policies and guidelines of Higher Education Commission. The following are the relevant details of courses offered:



Courses Under Semester System
BSc Computer Science

Semester - I

Course Code	Course Title	Theory	Lab
CS-101	Introduction to Information and Communication Technologies	3	1
CS-102	Programming Fundamentals	3	1
MT-101	Calculus and Analytical Geometry	3	0
HU-101	English Composition & Comprehension	3	0
NS-101	Applied Physics	3	0
	Total	**15**	**2**
	Semester Total	**17**	

Semester - II

Course Code	Course Title	Theory	Lab
CS-103	Object Oriented Programming	3	1
CS-104	Discrete Structure	3	0
HU-102	Communication & Presentation Skills	3	0
MT-102	Probability & Statistics	3	0
HU-103	Pak Studies	2	0
HU-104	Islamic Studies	2	0
	Total	**16**	**1**
	Semester Total	**17**	
	Total for First Year	**34**	

Semester - III

Course Code	Course Title	Theory	Lab
CS-201	Data Structures and Algorithms	3	1
CS-202	Digital Logic Design	3	1
HU-201	Technical and Business Writing	3	0
MT-202	Liner Algebra and Differential Equations	3	0
CS-203	Operating Systems	3	1
	Total	**15**	**3**
	Semester Total	**18**	

Semester - IV

Course Code	Course Title	Theory	Lab
CS-204	Introduction to Software Engineering	3	0
CS-205	Computer Organization and Architecture	3	1
CS-207	Introduction to Database Systems	3	1
MT-203	Numerical Computing	3	0
UE-201	University Elective – I	3	0
	Total	15	2
	Semester Total	**17**	
	Total for Second Year	**35**	

Semester - V

Course Code	Course Title	Theory	Lab
CS-301	Theory of Programming Languages	3	0
CS-302	Theory of Automata & Formal Languages	3	0
UE-301	University Elective –II	3	0
MT-301	Multi Variable Calculus	3	0
CS-305	Parallel & Distributed Computing	3	0
CS-306	Design and Analysis of Algorithms	3	0
	Total	**18**	**0**
	Semester Total	**18**	

Semester - VI

Course Code	Course Title	Theory	Lab
CS-307	CS Elective – I	3	0
CS-308	CS Elective - II	3	0
UE-302	University Elective –III	3	0
CS-309	Computer Networks	3	1
CS-310	CS Elective - III	3	0
	Total	15	1
	Semester Total	**16**	
	Total for Third Year	**34**	

Semester - VII

Course Code	Course Title	Theory	Lab
CS-400	Final Year Project - I	0	3
CS-401	CS Elective – IV	3	0
CS-402	Compiler Construction	3	0
CS-403	CS Elective – V	3	0
CS-404	Artificial Intelligence	3	0
CS-405	CS Elective – VI	3	1
	Total	**15**	**4**
	Semester Total	**19**	

Semester - VIII

Course Code	Course Title	Theory	Lab
CS-406	Final Year Project - II	0	3
HU-401	Professional Practices	3	0
CS-408	Information Security	3	0
UE-401	University Elective – IV	3	0
	Total	9	3
	Semester Total	**12**	
	Total for Final Year	**31**	
	Grand Total for Four Years	**134**	

Computer Science (CS) Elective Courses

Course Title	Credit Hours
Operations Research	3+0
Simulation and Modeling	3+0
Computer Graphics	3+0
Digital Image Processing	3+0
Digital Signal Processing	3+0
Computer Vision	3+0
Advance Software Engineering	3+0
Principles of Programming Languages	3+0
Data Communication	3+0
Distributed Computing	3+0
Data and Network Security	3+0
Wireless Networks	3+0
Telecommunication Systems	3+0
Microprocessor Interfacing	3+0
Web Engineering	3+0
System Programming	3+0
Distributed Database Systems	3+0
Data Warehousing	3+0
Expert Systems	3+0
Artificial Neural Network	3+0
Fuzzy Logic	3+0
Software Quality Assurance	3+0

Course Title	Credit Hours
Advance Object-Oriented Programming	3+0
Network Analysis and Design	3+0
Network Management	3+0
Game Programming	3+0
Cryptography	3+0
Network Programming	3+0
Cloud Computing	3+0
Visual Programming	3+0
Object Oriented Software Engineering	3+0
Computer Law	3+0
Computer Animation	3+0
Modern Programming Language	3+0
Data and Network Security	3+0
Advanced Topics in Computer Science	3+0
Financial Analytics	3+0
Natural Language Processing	3+0
Data Analytics Representations	3+0
Computational Finance	3+0
Data Science Tools and Techniques	3+0
Big Data and Hadoop Essentials	3+0
Internet of Things	3+0

University Elective Courses

Course Title	Credit Hours
Financial Accounting	3+0
Financial Management	3+0
Human Resource Management	3+0
Marketing	3+0
Economics	3+0
Psychology	3+0
International Relations	3+0
Foreign/Regional Language (French, German, Sindhi, Punjabi, Urdu etc.)	3+0
Philosophy	3+0

Course Title	Credit Hours
Introduction to Management	3+0
Quality Control & Engineering Standards	3+0
Quality Assurance and Management System	3+0
Quality Improvement tools & Methods	3+0
Entrepreneurship	3+0
E-Commerce	3+0
Social Media Marketing	3+0
Social Service	3+0

Note:
Theory and Lab courses are treated as separate courses.

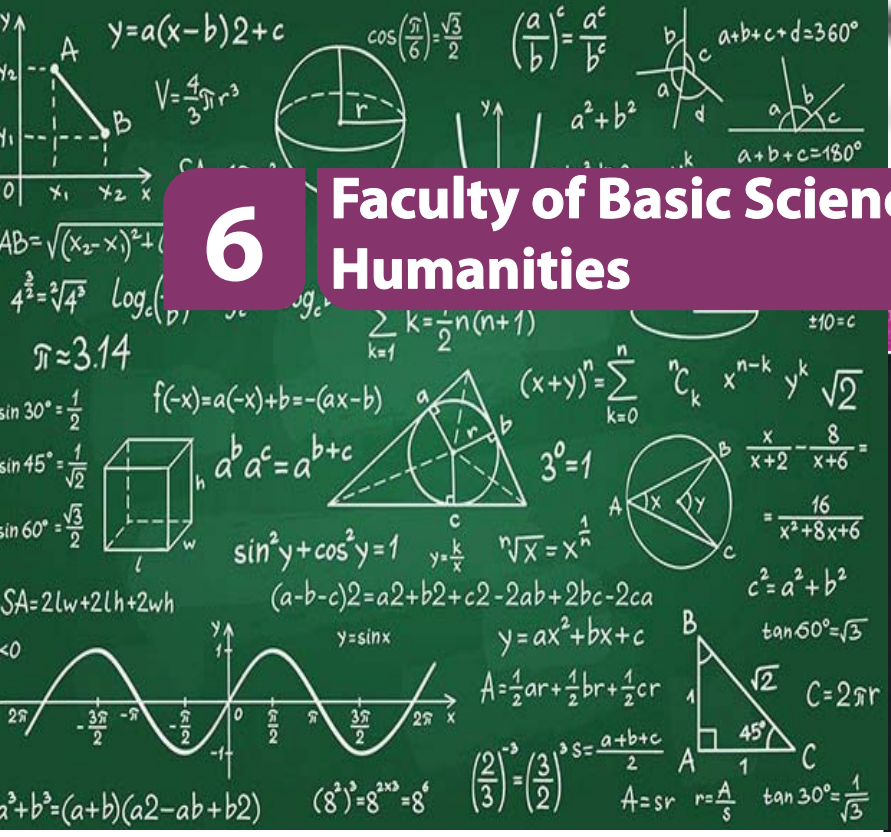
E-ROZGAAR PROGRAM PARTNERSHIP

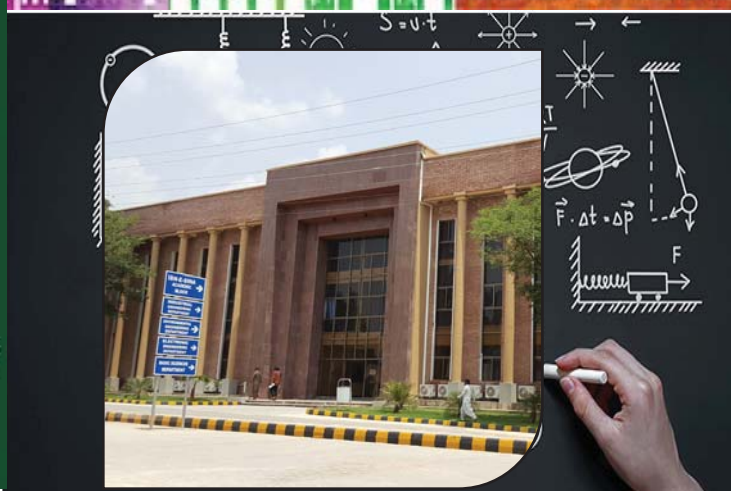
PITB under the Chief Minister E-Rozgaar Training Program in collaboration with Computer Science department UET, Taxila started the 3rd E-Rozgaar training center. This partnership provides the training and career development opportunities to young professionals of the province to help the counter, the menace of unemployment and provide them with the necessary means to earn an honorable living. Three main tracks are offered:

1. Technical
2. Non-technical
3. Creative Designing

The main objectives of this initiative are as follows:

- To provide training opportunities to youth for self-employment using internet-based freelancing
- Provision of career growth for young degree holders.
- Development of soft critical skills to enhance the employability of our youth.
- To ensure that our youth can earn a sustainable income.
- Empower youth by giving them an opportunity to not only work on their own but also to contribute positively to Pakistan by bringing in much needed foreign exchange for themselves and the country.
- To give an international face to Freelancing in Pakistan – Ultimately have a group of premium, top-notch Freelancers housed at the same place to work on international projects.
- To provide young individuals with opportunities for upward economic and social mobility.
- To provide exposure to unexplored yet lucrative career opportunities for our youth.
- Empower and alleviate the status of women by giving them the opportunity to earn an honorable living while working from home.





6 Faculty of Basic Sciences and Humanities

This faculty consists of 1 degree awarding department:

- Department of Basic Sciences and Humanities

DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

Chairman

Dr. Muhammad Mudassar

Mathematics and Statistics Division

Associate Professors

Dr. Muhammad Mudassar
PhD Mathematics (UET, Lahore)

Dr. Nasir Siddiqui
PhD Mathematics (QAU, Islamabad)

Assistant Professors

Ms. Safeera Batool
M.Phil. Mathematics (QAU, Islamabad)

Dr. Zaffer Elahi
PhD Mathematics (PU, Lahore)

Dr. Azeem Shahzad
PhD Mathematics (QAU, Islamabad)

Dr. Muhammad Altaf
PhD Statistics (USTC, China)

Dr. Muhammad Touqeer
PhD Mathematics (PU, Lahore)

Lecturers

Ms. Andleeb Abbasi
M.Phil Mathematics (QAU, Islamabad)

Ms. Sumaira Rashid
M. Phil Mathematics (QAU, Islamabad)

Mr. Syed Zulqarnain Haider
M. Phil Mathematics (QAU, Islamabad)

Dr. Syed Sabyel Haider
PhD Mathematics (NUST, Islamabad)

Ms. Haleema Sadia
M. Phil Mathematics (QAU, Islamabad)

Dr. Jawad Ahmad
PhD Mathematics (QAU, Islamabad)

Physics and Chemistry Division

Associate Professors

Dr. Malik Sajjad Mehmood
PhD Physics (PIEAS, Islamabad)

Assistant Professors

Dr. Muhammad Sultan

PhD Chemistry (QAU, Islamabd)

Dr. Muhammad Nadeem
PhD Physics (UTM, Malaysia)

Lecturers

Dr. Kulsoom Rahim
PhD Physics (QAU, Islamabad)

Dr. Muhammad Tariq
PhD Physics (Germany)

Humanities and Social Sciences Division

Assistant Professors

Dr. Naila Maqsood
PhD Pakistan Studies (QAU, Islamabad)

Dr. Sumaira Nawaz
PhD Islamic Studies (AIOU, Islamabad)

Ms. Fareeha Zaheer
M. Phil. English (AU, Islamabad)

Lecturers

Ms. Mariam Batool
M. Phil. English (AU, Islamabad)

Ms. Tehmina Farrukh
M. Phil. English (AU, Islamabad)

Dr. Syed Muhammad Abdur Rehman
MA Islamiyat (UOS)
MSc Economics (QAU, Islamabad)
PhD Islamics Banking and Finance (IIUI)

Dr. Sabahat Jaleel
PhD Pakistan Studies (QAU, Islamabad)

Mr. Muhammad Irfan
M.Phil. Islamic Studies (IIU, Islamabad)

Ms. Rabia Ramzan
M.Phil. English Literature (FJWU, Rawalpindi)

The Department of Basic Sciences

The Department was established in 1975 as a part of the University College of Engineering, Taxila and is as old as the institution itself. With the inception as an independent University in October 1993, the department has been placed under the Faculty of Basic Sciences and Humanities. The department provides instructors to various engineering departments for the courses in Mathematics, Physics, Chemistry, Economics, Statistics, Islamic Studies, Pakistan Studies, Ethics and English. The intention of the Minor Mathematics is to furnish student with a broad set of tools that will strengthen and diversify their engineering skills and enhance their employability prospects across multiple business sectors. The courses offered in the subjects of Applied Physics and Chemistry are very essential for forming the base of the engineering subjects. Also, the essential practical work in these subjects is carried out as a support to the immense forthcoming engineering practical work. The curricula of Physics and Chemistry including the recent development are constituted to meet the pre-requisites of the engineering subjects. The contents of the courses are regularly revised to keep abreast of the fast progress occurring in the various engineering faculties. Appropriate courses in Islamic Studies have also been constituted to be taught to the Muslim students of all engineering faculties. The purpose is to enlighten the soul and mind of the students and enable them to get appraisal

of tenets of Islam so that they may perform their duties with integrity and diligence when the future responsibilities of serving the nation will be bestowed upon them. The Non-Muslims students are offered courses in the subject of Ethics as well. The subject of Pakistan Studies was introduced at all levels for undergraduate first time during 1982. This course has been designed as a compulsory subject for the students at undergraduate level. The course framework is issue oriented. It has many dimensions, the historical and ideological background of Pakistan, the process of governance and national development as well as the issue arising in the modern age and posing challenges to Pakistan. The course was designed with a vision; The Pakistan Studies should open a window to future. It is an established fact that English is an international language, so proficiency in English language is required to compete with the modern world. Different courses are offered in different departments to enhance student's English language skills for professional purposes. Effective communication skills include everything from facial expression to visual literacy, from anxiety management to verbal skills, from body language to document presentation. Students can become more effective communicators by cultivating competency through these courses. These courses include Technical Report Writing as well which enhances students to write well in professional life. An English Language Laboratory has also been established in the department to improve a student's English language skills through the use of technology and interactive learning methods. The lab is equipped with computers, headphones, and other multimedia tools to provide a more immersive learning experience. English language lab provides an effective way for students to improve their language skills by offering them a safe and supportive environment to practice their English language skills.

Research Extension and Advisory Services

The faculty members are actively engaged in research work and have produced several research publications, which have been published in scientific journals of repute and presented in national and international conferences and seminars. The current research fields of interest in the subject of mathematics are mathematics in manufacturing, algebraic optimization, numerical analysis, integral equations, linear programming, queuing theory, quantum mechanics and Fluid Mechanics. The research field interests in the subject of Physics are Safety and Reliability of Nuclear Industry, Nano Physics, Study Material Properties with X-ray Diffractrometer (XRD), Optical Spectrometer and LCR Meter.

Programs

The Department of basic Sciences offers five degree programs: a four-year undergraduate program leading to BS degree in Mathematics and Physics, two-year postgraduate program leading to MS degree in Mathematics and Physics, and PhD Mathematics degree program. While MS and PhD programs are running since 2014, the BS Mathematics and BS Physics are newly introduced by the Department at the University. The first intake of students in BS Mathematics is planned for the Fall-2023 session.

Undergraduate Programs

The course curriculum for BS Mathematics and BS Physics is designed in such a way that it contains a set of core courses and, in addition, and a set of non-disciplinary and general education courses. The core courses allow the student to specialize in the subject of mathematics. The aim of the non-core courses is to develop several soft skills and moral/ethical values in the graduating students.

Laboratories

There are following labs in the department:

1. Basic Mechanics Lab.
2. Electricity and Magnetism Lab
3. Basic Electronics Lab
4. English Language lab.

Course Curriculum for BS Mathematics and BS Physics

BS Mathematics

General Education Courses

Course Code	Course Title	Credit Hours	
		Theory	Lab.
NS-112	Quantitative Reasoning 1	2	1
ISL-111	Islamic Studies/Ethics	2	0
CHM-112	General Chemistry 1	2	1
PS-111	Pakistan Studies	2	0
ENG-111	Functional English	2	0
ENG-121	Technical Report Writing	2	0
ENG-211	Communication and Presentation Skills	2	0
SOC-221	Social Psychology	3	0
MGT-321	Project Management	3	0
SOC-311	Professional Ethics	3	0
	Holy Qur'an Translation I (Imaniaat)	1	0
	Holy Qur'an Translation II (Ibadaat)	1	0
	Holy Qur'an Translation III (Mua'amlaat)	1	0
	Holy Qur'an Translation IV (Ikhlaqiaat)	1	0
	Total	**27**	**2**
	Total Credit Hours	**29**	

Non-Disciplinary Mandatory Courses

Course Code	Course Title	Credit Hours	
		Theory	Lab.
NS-121	Descriptive Statistics	3	0
NS-221	Inferential Statistics	3	0
PHY-111	Physics I/Basic Mechanics	2	1
PHY-121	Physics II/Electricity & Magnetism	2	1
PHY-211	Physics III/Modern Physics	2	1
CP-101	Computing Fundamentals	2	1
NS-111	History of Mathematics	3	0
MGT-411	Leadership and Entrepreneurship	3	0
	Total	**20**	**4**
	Total Credit Hours	**24**	

Math-Core Requirements

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MTH-111	Calculus and Analytic Geometry	3	0
MTH-211	Multivariable Calculus	3	0
MTH-122	Linear Algebra I	3	0

MTH-221	Differential Equations	3	0
MTH-123	Vectors and Tensor Analysis	3	0
MTH-212	Infinite Series	3	0
MTH-312	Numerical Methods with Programming	2	1
MTH-222	Complex Analysis	3	0
MTH-321	Methods of Mathematical Physics I	3	0
MTH-322	Differential Geometry	3	0
MTH-311	Real Analysis I	3	0
MTH-314	Metrics and Topology	3	0
MTH-223	Discrete Mathematics	3	0
MTH-313	Group Theory I	3	0
MTH-323	Functional Analysis I	3	0
MTH-325	Operations Research-I	2	1
MTH-421	Introduction to Mathematical Modeling	3	0
MTH-224	Number Theory	3	0
MTH-324	Abstract Algebra I	3	0
	Total	**55**	**2**
	Total Credit Hours	**57**	

Specialization (Distribution Courses)

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MTH-410	FYP I	3	0
MTH-420	FYP II	3	0
XXX	Distribution Course 1	3	0
XXX	Distribution Course 2	3	0
XXX	Distribution Course 3	3	0
XXX	Distribution Course 4	3	0
XXX	Distribution Course 5	3	0
XXX	Distribution Course 6	3	0
	Total	**24**	**0**
	Total Credit Hours	**24**	
	Grand Total	**134**	

Note:
Theory and Lab courses are treated as separate courses.

List of Distribution Courses

Pure, Applied and Computational Mathematics

Course Code	Course Title
MTH-412	Introduction to Logics
MTH-413	Numerical Linear Algebra

Course Code	Course Title
MTH-421	Theory of Partial Differential Equations
MTH-422	Axiomatic Set Theory

Course Code	Course Title
MTH-423	Combinatorial Mathematics
MTH-424	Math Programming & Optimization II
MTH-425	Linear Statistical Models
MTH-426	Time Series Analysis
MTH-427	Probability and Random Processes
MTH-428	Nonlinear Waves
PHY-122	Heat and Thermodynamics
MTH-429	Advance Complex Analysis
MTH-430	Lie-Symmetry Analysis
MTH-431	Solitary Wave Solutions
MTH-432	Dynamical Systems
MTH-433	Algorithms and Software Concepts
MTH-434	Data Curation, Management, Organization
MTH-435	Statistical Modeling

Course Code	Course Title
MTH-436	Statistical and Machine Learning
MTH-437	Fundamentals of Data Science
X34	Introduction to Bioinformatics
X36	Big data Analytics
PHY-321	Mathematical Methods of Physics –II
PHY-414	Computational Physics
PHY-324	Statistical Physics
PHY-312	Classical Mechanics
PHY-422	Nuclear Physics
PHY-412	Atomic & Molecular Physics
MTH-440	Relativity
MTH-441	Riemannian Geometry
PHY-323	Quantum Mechanics-I
PHY-415	Introduction to Wavelets
SE-308	Digital Image Processing

Pure Mathematics

Course Code	Course Title
MTH-414	Linear Algebra II
MTH-415	Real Analysis II/Topics in Analysis
MTH-415	Fuzzy Set Theory

Course Code	Course Title
MTH-416	Graph Theory
MTH-417	Measure Theory
MTH-418	Fixed Point Theory
MTH-419	Functional Analysis II

BS Physics
General Education Courses

Course Code	Course Title	Credit Hours	
		Theory	Lab.
ENG-111	Functional English-I	2	0
ISL-111	Islamic Studies/Ethics	2	0
ENG-121	Technical Report Writing	2	0
PS-111	Pakistan Studies	2	0
ENG-211	Communication and Presentation Skills	2	0
CHM-111	General Chemistry-I	2	1
MGT-321	Project Management	3	0
SOC-221	Social Psychology	2	0
SOC-311	Professional Ethics	2	0
MGT-411	Leadership and Entrepreneurship	3	0
	*Holy Qur'an Translation	1x4	0
	Total	**26**	**1**
	Total Credit Hours	**27**	

* This course is offered in Imaniaat, Ibadaat, Mua'amlaat and Ikhlaqiaat. Each part has 1 credit hour.

Non-Disciplinary Mandatory Courses

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MTH-111	Calculus and Analytical Geometry	3	0
MTH-211	Multivariable Calculus	3	0
MTH-122	Linear Algebra-I	3	0
MTH-221	Differential Equations	3	0
CP-101	Computing Fundamentals	2	1
CP-107	Computer Programming	2	1
CHM-211	General Chemistry-II	2	1
NS-121	Descriptive Statistics	3	0
NS-221	Inferential Statistics	3	0
	Total	**24**	**3**
	Total Credit Hours	**27**	

Core Courses

Course Code	Course Title	Credit Hours	
		Theory	Lab.
PHY-111	Mechanics	3	0
PHY-121	Electricity & Magnetism	3	0
PHY-122	Heat & Thermodynamics	3	0
PHY-212	Waves & Oscillations	3	0
PHY-211	Modern Physics	3	0
PHY-221	Optics	3	0
PHY-311	Electrodynamics-I	3	0
PHY-312	Classical Mechanics	3	0

PHY-313	Electronics-I	3	0
PHY-321	Mathematical Methods of Physics-I	3	0
PHY-322	Electrodynamics-II	3	0
PHY-323	Quantum Mechanics-I	3	0
PHY-324	Electronics-II	3	0
PHY-325	Statistical Physics	3	0
PHY-411	Quantum Mechanics-II	3	0
PHY-412	Atomic & Molecular Physics	3	0
PHY-413	Solid State Physics-I	3	0
PHY-421	Solid State Physics-II	3	0
PHY-422	Nuclear Physics	3	0
PHY-111L	Lab I - Mechanics	0	1
PHY-121L	Lab II - Electricity & Magnetism	0	1
PHY-212L	Lab III – Heat, waves, and sound	0	1
PHY-221L	Lab IV – Optics	0	1
PHY-313L	Lab V – Electronics	0	2
PHY-325L	Lab VI – Modern physics, spectroscopy	0	2
PHY-412L	Lab VII – Atomic physics, solid state physics,	0	2
	Total	**57**	**10**
	Total Credit Hours	**67**	

Specialization (Distribution Courses)

Course Code	Course Title	Credit Hours
PHY-410	FYP-I	3
PHY-420	FYP-II	3
XXX	Elective–I	3
XXX	Elective–II	3
	Total credit hours	**12**
	Grand Total	**134**

List of Elective Courses

Theoretical Physics

Course Code	Course Title
PHY-423	Mathematical Methods of Physics-I
PHY-424	Introduction to Quantum Information and Computation
PHY-425	Computational Physics

Experimental and Theoretical Physics

Course Code	Course Title
PHY-426	Laser Physics
PHY-427	Plasma Physics
PHY-428	Condensed Matter Physics
PHY-429	Particle Physics
PHY-430	High Energy Physics
PHY-431	Introduction to Material Science
PHY-432	Introduction to Photonics
PHY-433	Radiation Physics
PHY-434	Nanoscience and Nanotechnology

Experimental Physics

Course Code	Course Title
PHY-435	Techniques of Experimental Physics
PHY-436	Environmental Physics

Note:
Theory and Lab courses are treated as separate courses.

SERVICES AND COMMON FACILITIES

7 Library

7.1 Main Library

The Central Library of the University plays a vital role in dissemination of knowledge, teaching, research, and extension services. It has a seating capacity for about 400 readers at its different halls, which provide congenial conditions for study. The Library is stocked with encyclopedias, dictionaries, handbooks, standard specifications, yearbooks, almanacs, abstracts, indexes and a big reference collection of text and general technical books.

Library Timings
Monday – Friday: 08:00 am - 09:00 pm

7.2 Library Resources

Library has 69588 books and huge collection of journals pertaining to engineering and applied sciences. The members have open access to library collections arranged at reference and circulation sections.

7.3 Reference Section

Reference resources are located at the ground floor. They include the following:

(a) Reference Books: This section consists of dictionaries, encyclopedias, manuals, technical/ industrial standards, plus one copy of each title pertaining to engineering disciplines etc.

(b) Thesis/ Dissertations: Thesis of MSc. Engineering and PhD students are available in this section.

(c) Periodicals/ Journals: Central Library has a vast variety of research journals, proceedings, magazines and newspapers.

d) Computer Lab: This lab consists of 50 computers with free access to internet and electronic resources.

(e) CD/DVD Burn Facility is also available to library users on providing a writable CD/ DVD.

Readers' advisory service, reference services are provided to students, faculty and research scholars. Library users can contact to the library personnel in the Journal/Periodical Section OR In-charge Evening Shift regarding their queries. Reference resources are not borrowable/ transferable resources to any library user, but one can borrow them conditionally with the permission of Chief Librarian.

7.4 Book Bank

This section consists of textbooks recommended by the faculty. Every faculty member can CHECK OUT (borrow) 10 (ten) books while every undergraduate student can CHECK OUT (borrow) 08 (eight) textbooks for an academic session from this section.

7.5 Circulation Section

This section plays a key role for providing books to readers. The readers may contact at Circulation Desk OR Senior Librarian (Circulation) at the ground floor regarding the matters relating to library membership, fine and clearance etc. This section consists of the following subjects:

- Engineering and allied sciences Social Sciences, Humanities, Literature and Religions
- Basic Sciences like Mathematics, Physics, Chemistry and Computer Sciences etc.

Library users can CHECK OUT (barrow) books under the library rules. Books holding (reservation) facility is also available for library users.

7.6 Central Library Automation System

Central Library has launched its online web OPAC using Koha (an integrated library system). This ILS has been prepared according

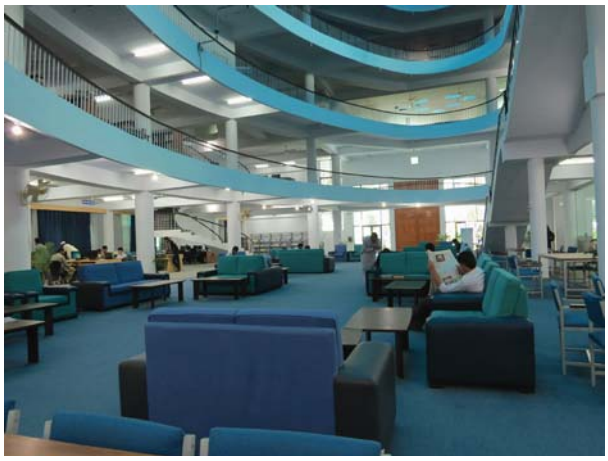
to international standards. Library users can check their CHECK OUTS, CHECK INs, borrowing status/history and fines. They also can prepare their private as well shared lists and can upload their own documents and much more through internet from anywhere, any time. To access the database please follow the link bellow:
http://web.uettaxila.edu.pk/uet/Library.asp
OR Main university website >> Life at UET >> Library. Please email us at: central.livrary@gmail.com

7.7 Online Resources: Digital Library

To meet the requirements of students and researchers of UET, Taxila, the provision of quality scholarly information based electronic delivery through Pakistan Educational Research Network (PERN) is available in the Library. HEC has given the online access to online books of almost all major international famous publisher on a large number of subjects, hundreds of thousands of journals, millions of articles, thousands scholarly research thesis and many international databases free of charge through university intranet.

ASTM

The ASTM Standards & Engineering Digital Library is a vast collection of industry-leading standards and technical engineering information. It covers a broad range of engineering disciplines, including aerospace, biomedical, chemical, civil, environmental, geological, health and safety, industrial, materials science, mechanical, nuclear, petroleum, soil science and so-lar engineering.



AMERICAN SOCIETY OF CIVIL ENGINEERING (ASCE)

The ASCE Research Library provides access to more than 18,500 full-text papers from ASCE Journals and Proceedings.

ASSOCIATION OF COMPUTING MACHINERY (ACM)

- The ACM digital library contains full-text from 28 ACM Journals and Transactions, 10 ACM Magazines, over 40 ACM Special Interest News- letters, 15 non-ACM journal and publications and over 100 annual conference proceedings.
- Content strengths include all areas of Information Technology, with full archival content for all ACM publications.

INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)

- IEEE database provides access to almost a third of the world's current Electrical Engineering and Computer Science literature.
- IEL provides full-text access to 132 IEEE and 45 IEE journals, magazines, transactions, and conference proceedings as well as active IEEE standards.

AMERICAN PHYSICAL SOCIETY (APS)

- APS database provides access to 9 prestigious research publications
- Includes the five-specialist Physical Review Publications, and the PROLA archive.

AMERICAN ASSOCIATION OF PHYSICS TEACHERS (AAPT)

- Two AAPT publications provide up to date physics knowledge, at a level comprehensible for many users.
- AAPT publications assist in the learning of new and traditional teaching methodologies and the use of modern

technology in Physics.

AMERICAN INSTITUTE OF PHYSICS (AIP)

- AIP database provides access to the full collection of highly rated of 11 Journals and conference proceedings.
- Covers developments in Physics, Industrial Ap- plications (Applied Physics), and advances in Scientific Computing.

OPTICAL SOCIETY OF AMERICA (OSA)

- OSA database provides access to 8 peer-reviewed journals that set the publications standard for advanced optics research within each major sector of the field.
- OSA journals cover the full spectrum of optics research, including the fields of Physics, Materials Research, Atmospheric Studies, Visual Psychology, Biomedical Optics, Physiology, and Ophthalmology, as well as Mechanical, Computer, Electrical and Optical Engineering.

JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA (JASA)

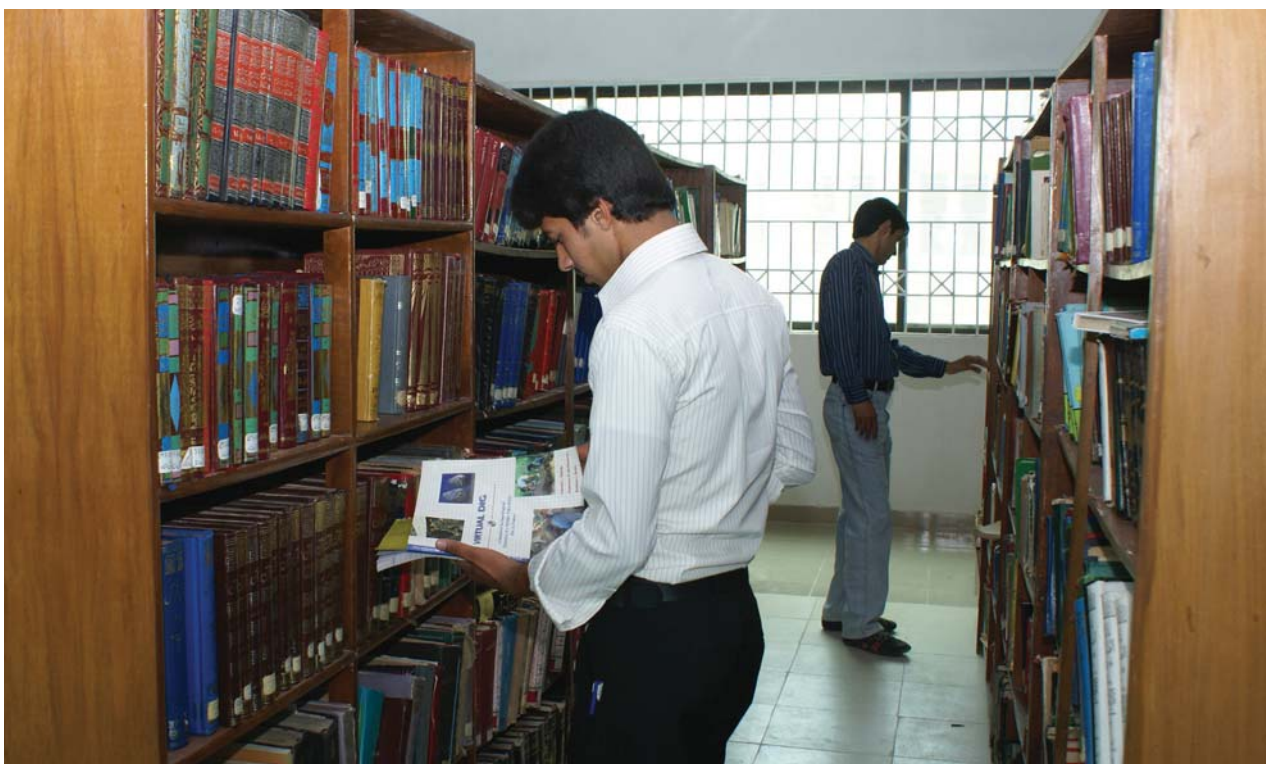
- Since 1929 The Journal of the Acoustical Society of America has been the leading source of theoretical and experimental research results in the broad interdisciplinary subject of sound.
- The Journal serves physical scientists, life scientists, engineers, psychologists, physiologists, architects, musicians, and speech communication specialists.

ELSEVIER (Science Direct)

- Science Direct is the world's leading electronic collection of scientific journals.
- Renowned for the high-quality of its content in all branches of science, technology, and medicine. Subscribed subject Areas are:
- Energy
- Engineering
- Computer Science
- Materials Science

ESDU - Engineering Solutions for Academia

- ESDU collection is based on industry standard tools and software as part of teaching and research projects.
- ESDU provide validated design guides, introductions, methods, data, and software used in Industry and suitable for simple, rapid inclusion in these engineering programs:
  - Aerospace Engineering
  - Civil Engineering
  - Chemical Engineering



- Material Science
- Mechanical Engineering
- Process Engineering
- Structural Engineering

SPRINGER LINK

- Springer Link provides access to 503 full-text Springer-Verlag Journals and 738 full-text journals formerly published by Kluwer Academic Publishing.
- One of the world's leading information services for Science, Technical and Medical journals.

TAYLOR & FRANCIS JOURNALS

- Taylor & Francis has grown rapidly over the last two decades to become a leading international academic publisher.
- More than 1000 journal titles including over 780 journals are listed in the 2010 Thomson Reuters, Journal Citation Reports® in a full range of disciplines like:
- Engineering, Computing & Technology
- Environment & Agriculture
- Business, Management & Economics
- Chemistry
- Mathematics & Statistics
- Physics
- Library & Information Science
- Media, Cultural & Communication Studies

- Social Sciences and more…

WILEY-BLACKWELL JOURNALS

- Since the Blackwell-Synergy merger with Wiley Interscience, all the journals available to HEC consortium are now available through Wiley Interscience.
- Online database containing over 1,234 journals in science, technology, medicine, humanities, and social sciences.

FREE MEDICAL JOURNALS

47 leading international medical Journals available through "Highwire Press", without any registration.

7.8 Video Conferencing Facility

Video conferencing facility is available in accreditation with HEC. This facility is used to bring people at different sites together for a meeting. This can be as simple as a conversation between two people in private offices (point-to-point) or involve several sites (multi-point) with more than one person in Video conferencing hall at different sites. Besides the audio and visual transmission of meeting activities, video conferencing can be used to share documents, computer-displayed information, and whiteboards.

8 Technical Journal

Technical Journal is a quarterly publication of UET, Taxila recognized by HEC in "X" category.

It is being published regularly with a key objective to provide the visionary wisdom to academia and researchers to disseminate novel knowledge and technology for the benefit of society. Technical Journal is indexed with well recognized following international databases:

- AGRIS DATABASE
- Aluminum Industry Abstracts
- ANTE: Abstracts in New Technology & Engineering
- Ceramic Abstracts
- Civil Engineering Abstracts
- Computer and Information Systems Abstracts (Module)
- Copper Technical Reference Library
- Corrosion Abstracts
- Directory of Research Journals Indexing
- Earthquake Engineering Abstracts
- EBSCO DATABASES
- Electronics & Communications Abstracts
- Engineering Research Database
- Engineered Materials
- Environmental Engineering Abstracts
- Environmental Science and Pollution Management
- Library of Congress, USA
- Materials Research Database
- Mechanical & Transportation Engineering Abstracts
- Metadex
- OCLC World Cat
- ProQuest Products
- PASTIC SCIENCE ABSTRACTS
- Solid State and Super conductivity Abstracts

Submission of paper remains open round the year. Researchers and academia can submit their papers at any time which they deem fit. Presently there are no charges for publication of research paper in Technical Journal.

9 Network Administration & Research Center (NARC)

Network Administration and Research Center (NARC) was founded to provide better support and services to the University. NARC is an outcome of University Computerization and Network Enhancement Pro- gram (UCNEP) project. Under UCNEP project, state of the art equipment was procured, and latest technology was introduced to enhance the quality of communication infrastructure, existing Lab facilities and processes of the University.

NARC is responsible for design and development of networking infrastructure within University campus and sub campuses. It also provides 24-hour internet facilities for the university. Wireless hotspots are available in campus of the university to use internet and Intranet services for students and researchers. NARC staff comprises of highly skilled, well qualified and technically competent workers who perform their tasks as a passion of their life.

NARC is not only limited to provide services to the University and its sub campuses, it also helps in providing technical assistance to other projects of national interest. NARC staff is actively involved in pro- viding consultancy services to other universities and educational institutes, thus contributing towards the development of IT infrastructure of Pakistan.

NARC provides 24 hours research facilities to PhD scholars and researchers. All facilities provided by NARC are available round the clock. This includes Digital Library which provides free access to research papers and technical material from leading international forums and organizations around the world. It also provides High Performance Computing (HPC) facilities for students and researchers.

Necessary equipment required to complete the semester projects and final year projects is provided free of cost to the students. Moreover, technical guidance is also provided to them. NARC hosted the 17th International Conference on Microelectronics (ICM'05) held in December 2005 and ICOCN-07(International Conference on Optical Communication and Networks).

NARC is responsible for planning and management of IT related services of the University. It has successfully implemented Smart University and Safe Campus project, in collaboration with HEC and Huawei. This project provides:

- Wi-Fi blanket coverage
- Intelligent Video Surveillance (IVS) services
- All the departmental buildings, Hostels, Cafes, and Parking Areas are provided Wi-Fi hotspot services.
- Users can enjoy Wireless roaming services throughout the campus.
- UET, Taxila has a total Internet bandwidth of 513 Mbps through PERK and Smart University while an additional 100 Mbps is provided by PTCL as part of their MoU for 4G wireless services.
- All the buildings as well as boundary areas are covered by IP-based video cameras.
- The data generated by cameras will be stored locally at UET, Taxila as well as at HEC Data Center, Islamabad.
- Moreover, EDURoam (Educational Roaming) service is being provided with this project. UET, Taxila (Users can use their local domain username/passwords to connect with IT services at any institute including HEC within Pakistan as well as abroad.

NARC has its own web hosting setup, which enables it to host many web-based applications. These include UET, Taxila Technical Journal, learning management system (LMS), faculty management system, Management Information system (MIS) for alumni, and so on. NARC has also setup its online helpdesk to facilitate the faculty and students. In case of any issue related to IT services, faculty and students may submit their complaints 24/7 to the NARC helpdesk, where they are resolved immediately. NARC datacenter is powered by Genset which ensures 24/7 uninterrupted IT services to the University.

NARC has provided official email accounts to all the undergraduate as well as postgraduate students. Students can use these accounts to coordinate among themselves, use Microsoft Teams to attend online classes during COVID-19 pandemic and access Microsoft cloud storage up to 2TB. It also enables them to access free Microsoft software made available through HEC/Microsoft Education Alliance.

ERP Vision

The use of Enterprise Resource Planning (ERP) to attain the following goals:

- Improve productivity and efficiency of process within the university
- Enhance delivery of services to students, parents, faculty, and staff members

NARC is deploying "Campus Management System" namely (ERP@CLOUD), is a powerful, flexible, comprehensive, and cross platform web-based solution.

ERP@CLOUD comprises following modules:

- Admissions
- Fee Management
- Academics Management
- Outcome Based Education (OBE)
- Examinations (OBE Based & Traditional)
- Students' Feedbacks
- Teachers' Portal
- Student's Portal
- Human Resource Management & Payroll
- Accounting & Finance
- Assets Management
- Students' Help Desk

10 Directorate of Students Affairs

The primary function of the Directorate is to organize extra-curricular activities of the students and to foster their intellectual, literary and artistic potentialities, which remain untapped in the classroom. It functions normally through societies & clubs; each devoted to some sport or cultural and artistic activity. The students join these societies according to their inclinations and aptitudes. Another function of the directorate is to maintain liaison with a wide cross-section of students and to be responsive

to their needs and problems. Following are the societies/clubs functioning at UET, Taxila:

- Quaid-e-Azam Debating Society (QDS)
- UET Media Club
- University Art & Culture Society (UACS)
- UET Adventure Club (UETAC)
- Environmental & Horticultural Society
- Rashid Cheema Health & Blood Donner Society (RCHBDS)
- Al-Mohandis Literary Society
- Character Building Society (CBS)
- National Youth Assembly as student society
- Umeed-e-Subh (Student Welfare Society)
- Green Youth Movement (GYM)
- University Athletics & Sports Club
- Students' Counseling & Guidance Bureau (SCGB)

11 Directorate of Sports

University has focus about the health and wellbeing of students. Both boys and girls students are encouraged to participate in sports activities. University has directorate of sports to plan and manage sports infrastructure and facilities in the university. University has Multipurpose hall that serve as indoor sports facility for Bedminton, Table tennis, Basket ball, Snooker and gym. Female students avail this indoor facility and dedicated time is fixed for female students. Female students residing in hostel also avail this facility. Now university is planning to extend these sports facilities in female hostels so that female students can avail this facility on full time basis.

University has outdoor facilities for cricket , hockey, football volleyball. There are multiple grounds for cricket and football.

Infrastructure for archery and swimming are being planned. Similarly outdoor exercises machine are also planned to be installed in hostel as well as academic areas.

University has dedicated sports weeks in each semester. Tournaments are organized by directorate of spots. Prizes are awarded to winning teams. University also encourage students to participate in inter university competitions and facilitates students for

participation in such events.

12 Halls of Residences

The university provides residence facilities to both male and female students. For Pakistani students, university has five halls of residence for male students and two halls of residence for female students. There is one dedicated hall of residence for international male students, while female students reside with Pakistani students. The accommodation is provided on sharing basis. The halls of residence are named as:

- Iqbal hall
- Quaid-e-Azam Hall
- Abu Bakar Hall
- Umer Hall
- Usman Hall
- Ali hall
- Jabber Bin Hayyan hall
- Ayesha Hall (Girls Hostel)
- Fatima Hall (Girls Hostel)

Each hall of residence has multiple allied facilities such as mess, common room/study area, prayer room and laundry areas. Water coolers along water filters are installed in each hall of residence at multiple locations for convenience of students.

The university has dedicated support staff for cleanliness and maintenance of hostels and to resolve the complaints of resident students. Electrician, plumber, carpenter, attendant and janitorial staff is available throughout the day to serve the residents. Likewise, university has dedicated staff for gardening and maintenance of lawns of halls of residences.

The university provides quality mess service in each hall of residence to serve standard food on non-profit basis. Four parameters are considered as quality measure for messes: taste, quantity, quality of ingredients, low cost. The messes had been approved by Punjab food authority and follow the guidelines of Punjab food authority.

The university has planned to provide study areas to students in halls of residences so that they can focus on their studies. Common rooms and messes are also declared as study areas during quite hours. Messes operate for six hours a day, therefore remaining time may be utilized for study purposes.

The university is planning to offer a dedicated workplace to resident students who are involved in online earning activities. Internet and air conditioning facility will be provided so that students can utilize their time efficiently in this productive activity. Self-service kitchens are also being setup so that students can cook at their own to meet their dietary requirements.

Details related to hostel allotment procedure,

hostel rules and regulations and hostel hierarchy have been described in hostel prospectus that can be downloaded from official website at time of allotment.

13 Estate Office

The University Campus spreads over 163 acres of land, and requires considerable efforts to keep the gardens, lawns, roadside rows of trees and flower- beds in good trim. The efforts of this office give the Campus a pleasing look, which attracts many visitors in the mornings and evenings. For the convenience of the students, a shopping center is located near the University hostels. This center has a laundry, a general store, stationery, and fruit shop. The office looks after security, sanitation, maintenance of lawns and gardens, and shopping facilities at the campus. It has a large squad of uniformed watchmen who guard the University buildings and property. Its sanitation staff keeps the buildings, roads, lawns, and other spaces clean and tidy.

14 Transport

Adequate transport facility is provided for students and the buses have routs for Rawalpindi, Islamabad, Hassanabdal, Wah Cantt. This facility is, however, not obligation of the University and it can be reduced or terminated if the policy and/or the financial conditions so demand.

The university has following vehicles:

Type of Vehicle	No. of Vehicles
Buses	22
Faculty Vans	02
Staff Cars	11
Tractor Trolleys	03
Pickup Vans	03
Ambulances	03
Motor Bikes	02
Miscellaneous	04

15 Dues & Financial Aid Services

Focal Person:

Mr. Naeem Yousaf Cheema

Dues and Financial Aid Services section deals with all kinds of fee/dues, scholarships, stipends, loans, and fee concession on kinship basis under the charge of the Treasurer. The University provides generous financial assistance to the meritorious and needy students. At present following scholarships/ stipends are available for the University Students.

List of Scholarships/Stipends

Sr.	Nature of Scholarships / Stipends	Funding Agencies / Departments/ Donors
1	University Merit Scholarship	UET, Taxila
2	University Welfare Scholarship	UET, Taxila
3	Benazir UG Scholarship	HEC, Islamabad.
4	Afghan National Students Scholarship	HEC, Islamabad
5	HEC – Sri Lankan Students Scholarship	HEC, Islamabad
6	Baluchistan & FATA Students Scholarship	HEC, Islamabad
7	OGDCL Need Based Scholarship Program	HEC, Islamabad
8	IOK Students Scholarship	Ministry of Federal Education & Professional Training, Islamabad
9	Stipend to Azad Kashmir Nationals/ J&K Refugees students	Ministry of Kashmir Affairs and Gilgit-Baltistan, Islamabad
10	PEEF Scholarship	The Punjab Educational Endowment Fund (PEEF), Lahore
11	Educational Stipend	Pakistan Bait-Ul-Mal
12	PEF Scholarship	Professional Education Foundation (PEF), Karachi
13	The 66 Foundation Scholarship	The 66 Foundation, Lahore
14	Merit Scholarship/Stipend	Govt. of Gilgit-Baltistan, Directorate of Education Colleges, GB.
15	IEP-SAC Scholarship	The Institute of Engineers Pakistan-Saudi Arabian Center (IEP-SAC), Riyadh, Saudi Arabia
16	Excellence Award for Higher Professional Courses	Fauji Foundation, Chaklala
17	Foreign (Palestinian) Students Scholarship	Ministry of Economic Affairs (PTAP Section), Islamabad
18	Board Scholarships	FBISE and other BISE boards
19	Graduate/MS Engineering students Scholarship	Pakistan Engineering Congress, Lahore
20	Diya Pakistan Scholarship	Diya Pakistan Foundation
21	FFC Scholarship Scheme for the Wards of Farmers	Fauji Fertilizer Company Limited, Rawalpindi
22	Workers Welfare Fund Scholarship	Punjab Workers Welfare Board, Lahore
23	Bestway Foundation Scholarship	Bestway Foundation, Islamabad
24	BEEF Scholarship	Baluchistan Education Endowment Fund (BEEF), Quetta

16 Health Facilities

The University provides medical facilities to its

employees and students. Salient features of the existing health policy for students are listed hereunder:

- Students will be provided free consultation by the Medical Officer.
- Available medicines will be issued to students through authorized prescription only.
- Night dispensary service will be available in emergency only.
- In acute emergency, where a student cannot move, immediate report will be made to RT who will make arrangements for further treatment under rules (i.e. ambulance, consultation, admission etc.). The expenditure shall be borne by the student.
- Boarders will be required to fill in the proforma of previous medical history mentioning the disease he carries.
- Indoor treatment from unauthorized medical attendants is not allowed.
- Pathology Lab has been established by the kind cooperation of the Worthy Vice Chancellor and basic lab test facilities are being offered.
- Three well equipped ambulances are available for 24 hours for emergency cases.

17 Placement Office

The Placement Office at UET, Taxila is established to search and develop contacts mainly with the national and multinational industries in public as well as in private sectors and R&D organizations with an aim to identify the prospective employers, jobs, scholarships and industrial training for university students.

Office assist current and potential graduating students and alumni in the overall process of self-evaluation, career assessment and job search. In this regard, our objective is to connect our graduating students with meaningful career prospects by strategically aligning their academic qualifications with their goals and interests.

This office offers our Students, Alumni and Employers the following services:

- Career Advisory Group (CAG)
- Career Counseling (One-to-One/Group)
- Resume and Cover Letter Assistance
- Workshop for Resume writing/skills
- Interviewing Skills
- Internship Guidelines
- Job Search Strategies
- Letter of Recommendations
- Career - Development Seminars

It plays the role of a bridge between university graduates and employers, scholarships donors, and to have financial assistance or loans etc. Hence placement office is committed to provide friendly and proficient services to the university students, graduates, employers and scholarship donors.

Facilitating fresh graduates of all degree programs of the university in finding their dream jobs and helps pursuits for lucrative career opportunities for the alumni. So, it serves as a platform for linkage of academia and industry and bridges the gap, thus making it possible for real-time industrial input in the engineering curricula.

The office matches the great talent coming out of various engineering departments at the university with highly sought-after Global employers. Placement office advertises the university product i.e. graduating engineers in the job market. For this purpose, an annual mega event i.e. Open House and Career Fair is organized in which leading national industries are invited to visit the university to have

- A meeting place to the Institute's senior students and their prospective employers.
- An effective platform for industry-university interaction.

- An opportunity for the industry representatives to acquaint themselves with the academic environment provided to the students.
- Witness Final Year/Term Projects' exhibition
- Interview/evaluate graduating students for employment
- Visit lab facilities
- Discussion for industrial problems with faculty members of various disciplines
- Right possibilities of industry-academia collaboration

It provides career counseling and placement services and arranges an array of activities such as company profile presentations, on campus recruitment, organizing workshops on effective CV writing and interviewing skills, and job exploration seminars etc. The aim is to help the students/alumni and the corporate sector in choosing from the best available options and making the right match.

It also provides information to the students about the recent jobs and scholarships available by displaying the information on the official notice boards frequently. Students get to know the different areas where they can grow as engineers and enhance their natural and technical skills which they developed during their stay as students in the University. It frequently arranges visits of the prospective employers and their discussion with faculty members and students of relevant departments regarding the emerging need and training of the students in the same direction. The placement office facilitates various organizations in the process of pre-selection of students who are about to complete their studies by arranging tests and interviews of prospecting candidates for placement in the industry. As a result, the Placement Office maintains a mailing list of major companies employing engineers who are constantly informed about the graduating classes at appropriate time.

A short list of industries in which our graduates are regularly employed:

- NESPAK
- PTCL
- Lafarge Cement
- Fauji Cement Limited
- WAPDA Academy
- OGDCL
- Attock Refinery Limited
- Nayatel
- ZTE
- Ufone
- Pakistan Ordinance Factories
- Heavy Mechanical Complex
- Heavy Industries Taxila
- Pakistan Aeronautical Complex Kamra
- KSB Pumps
- K-Electric
- Huawei

International Linkages

UET, Taxila is a multi-disciplinary university involved in internationally relevant engineering developments, and International study is a very significant part of the educational goals and strategic plan of UET, Taxila. Globalization of the campus and the curriculum is specifically part of our core values. Through wide and ambitious portfolio of research capability, UET, Taxila is today connected with research institutions, industry, and businesses around the globe.

The Directorate of International Linkages (IL) expands the international scope of the University by developing official agreements with universities abroad. International linkages build knowledge and shape new schools of thought and discovery. In addition to this we are increasing the number of exchange institutions and expanding into new countries so that opportunities for connections continue to grow to facilitate the exchange of students and faculty.
Internationalization advances through international Linkages at UET, Taxila by:

- Growing the number of UET students to study abroad and international students to study at UET.
- Facilitating faculty exchanges both here and abroad for collaborative research and

professional development; and
- Providing weekly opportunities for campus and local community members to learn about the hottest topics on the global stage today.

Taking Benefit of International Linkages

For students, participating in an exchange program is an exciting and challenging way of broadening their horizons. It provides an opportunity to gain experience of living and studying in a new culture and environment. During the program, students are pro- vided a unique chance to:

- Globalize and enhance their educational experience
- Explore career opportunities through networking
- Broaden their personal and educational perspectives
- Explore, appreciate and understand different cultures
- Improve language skills and cultural understanding
- Eliminate fear and prejudice among nations

UET, Taxila currently has signed MOUs with the following universities:

Europe
- Hasselt University, Belgium
- Fachhochschule Dusseldorf (FH-D), University of Applied Sciences, Germany
- Halmstad University, Sweden
- Lecberac, Czech Republic

Africa
- Alexandria University, Egypt
- Egypt-Japan University of Science and Technology, Egypt

Asia and Asia Pacific
- Peking University, China
- Tsinghua University, China
- Wuhan University, China
- Huazhong University of Science and Technology, China
- Islamic University of Technology, Bangladesh
- Institute for Sustainable Energy Policies (ISEP), Japan
- Seoul National University, Korea
- Universiti Teknologi, Malaysia
- Universiti Tunku Abdul Rahman, Malaysia
- Asian Institute of Technology, Thailand

International Alumni

UET, Taxila regularly attracts international students from Middle East and Africa including Palestine, Yemen, Jordan, Afghanistan, Bosnia, Thailand, Syria, India, Sudan, Somalia. Since 2009, about 130+ foreigner students got admission for their bachelor's degree at UET.

18 Planning & Development

The Planning and Development Directorate is the backbone of the University which plays a vital role in its growth and development. The directorate is majorly responsible for arranging funds for the execution to strengthen and promote developmental activities and human resource development at various departments of University.

Our Vision

To make UET Taxila vision a reality by providing and monitoring comprehensive physical planning and development through financial resources in support of teaching, research and services. We promote quality, transparency, efficiency, and merit for our institution.

Key Functions

- Preparation of **Public Sector Development Programs** (Concept Papers, PC-I, PC-II)
- Liaison with HEC for **submission & approval** of newly Proposed Development Schemes
- Arrange/attend in-house review meetings, **CDWP & DDWP** meetings at Planning Commission & HEC Forums
- **Review of PC-IVs** submitted by Project Directors and onward submission to HEC
- **Coordination** with HEC, Monitoring Teams, Planning Commission & other

stakeholders

Monitoring Mechanism

Monitoring and follow-up of all development projects are conducted with the collaboration of Monitoring and Evaluation wing of HEC in order to ensure the smooth implementation of the projects through Progress Review meetings, Quarterly Progress Reports, Monthly Financial Reports on PMES, liaison with HEC for fund releases etc.

Infrastructure Development Projects Funded by HEC

i. Ongoing Projects:

Following infrastructure development projects funded by HEC through PSDP are in process at UET Taxila:

1. Strengthening of Lab Facilities in 05 Leading Engineering Universities (UET Peshawar, Taxila, Lahore, Khuzdar & NED Karachi) Admin Approval issued, Funds Awaited
2. Commencement of 4 years undergraduate Program in Water Resource Engineering & Petroleum Engineering at UET Taxila

ii. Project submitted to HEC for Approval:

Following projects have been submitted to HEC/PHEC under PSDP/ADP 2023-24 for approval to strengthen the R&D infrastructure of the university and to promote quality education in various streams.

1. Enhancing The Capacity of Surveying & Testing Labs at Civil Engineering Department UET Taxila
2. Establishment of Centre of Excellence for Advanced Manufacturing, Automation and Testing at UET Taxila PHASE-I
3. Establishment of Centre of Excellence for Advanced Manufacturing, Automation and Testing at UET Taxila PHASE-II
4. Concept Paper: Establishment of Ghandhara Centre of Cultural Heritage at UET Taxila
5. Boost up the capacity of Transportation Engineering facility at UET Taxila to cater for the industry demands
6. Concept Paper: Establishment of Main Auditorium Complex at UET Taxila
7. Concept Paper: Establishment of Sub Campus of UET Taxila At Pind Dadan Khan, District Jhelum
8. Concept Paper: Establishment of Product Design & Development Centre in Industrial Engg. Department UET, Taxila
9. Concept Paper: Strengthening of Engineering Technology Programs at UET Taxila
10. Establishment of Female Student's Fitness Centre at UET Taxila

19 Quality Enhancement Cell

The Quality Enhancement Cell (QEC) was inaugurated at the University of Engineering and Technology, Taxila, in February 2011. Entrusted with the crucial mission of fostering excellence in educational standards and program management, the QEC plays a pivotal role in shaping the university's commitment to quality.

The QEC is devoted to the development and implementation of robust quality assurance processes and evaluation methods, ensuring the high educational standards that UET Taxila is renowned for are consistently maintained. These practices touch upon every facet of academic life at UET Taxila and span across all program levels.

In addition, the QEC serves as the cornerstone of UET Taxila's continuous improvement strategy. It works in close collaboration with the Quality Assurance Agency (QAA) of the Higher Education Commission (HEC), under whose diligent supervision academic activities at UET Taxila are regularly monitored.

Through the collective efforts of these entities, UET Taxila maintains its relentless pursuit of academic excellence, ensuring its place as a premier educational institution

dedicated to producing well-rounded, competent graduates equipped to excel in their respective fields.

Postgraduate Program Review and Institutional Performance Evaluation:

The University of Engineering and Technology, Taxila was chosen by the Higher Education Commission (HEC) of Pakistan for a review of its MS/MPhil & PhD Programs. A meticulous two-day on-site inspection took place on November 3rd and 4th, 2021. The review was conducted by an expert panel, strictly following the criteria and guidelines for MS and PhD level programs. This review, a historical first for the institution, concluded positively, with the panel expressing satisfaction over the quality of teaching and learning at UET Taxila and strongly endorsing the continuation of all postgraduate programs.

In the same year, UET Taxila had the honor of its inaugural Institutional Performance Evaluation (IPE) visit, also facilitated by the HEC. A rigorous three-day on-site review, from December 7th through 9th, 2021, was conducted by an expert panel in adherence to IPE criteria and guidelines.

This groundbreaking review left the panel impressed with the institution's performance, leading to valuable suggestions for even further enhancements. Both of these milestone reviews stand as testament to UET Taxila's ongoing commitment to quality education and continuous institutional improvement.

Self-Assessment Reports:

UET Taxila ensures a rigorous evaluation of its postgraduate academic programs through an exhaustive self-assessment process, conducted by a specially nominated Program Team (PT). This group, chosen by the respected head of the academic department, comprises highly skilled professionals responsible for preparing the Self-Assessment Report (SAR) and serving as a focal point during the assessment period. Following this, the Assessment Team (AT) - another group of professionals, including external members from other universities - reviews the SAR and presents its findings in the AT Report.

Accreditation Status and Outcome-Based Education:

UET Taxila strictly adheres to approved guidelines for its B.Sc. Engineering & Technology Programs, which have all received accreditation from their respective councils, including the PEC and NCEAC. The university also embraces an outcome-based learning education system, leading to all undergraduate Engineering programs receiving Level-II OBE accreditation by the PEC.

NOC for MS / PhD Programs:

UET Taxila's MS/PhD programs comply with the guidelines approved by the HEC, and the university holds the necessary NOCs from the HEC for all ongoing programs.

Memberships:

UET Taxila proudly holds memberships with two quality assurance bodies - the Asia Pacific Quality Network (APQN) and the Pakistan

Network for Quality Assurance in Higher Education (PNQAHE).

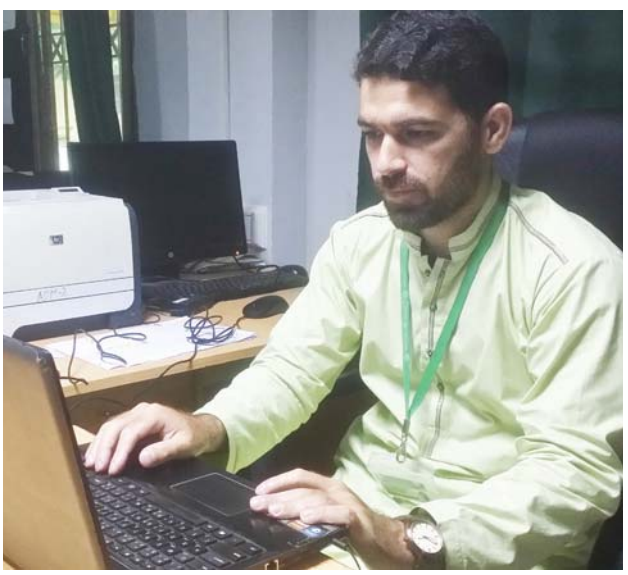
QEC Achievements:

All praise be to Almighty Allah, the Quality Enhancement Cell (QEC) at UET Taxila has been blessed with an opportunity to play a role in the attaining the following milestones over the last three years for the university:

- UET Taxila stands as the top-ranked engineering university in Pakistan according to the Times Higher Education Ranking, and ranks 600-800 globally, reinforcing our status as the nation's premier institution for engineering education.
- In the Young University Ranking 2023 by Times Higher Education, for universities strictly 50 years old or less, UET Taxila achieved a commendable position in the 151-200 range.
- The institution secured 142nd spot in the Asia University Ranking 2023 by Times Higher Education.
- UET Taxila improved its position from 735th in 2021 to 695th in 2022 on UI GreenMetric World University Ranking which is focused on environmental sustainability.
- Based on the Yearly Progress Report (YPR), our QEC ranking improved drastically to the second-highest category, i.e., X-category by QAA HEC.
- QEC of UET Taxila also gained recognition in the annual conference booklet of the Pakistan Network for Quality Assurance in the Higher Education (PNQAHE).

These achievements, drawing heavily from the undeterred support by students, faculty, staff, and top management, underline UET Taxila's unwavering commitment to quality and excellence in higher education.

ADMISSION PROCEDURES



20 General Instructions

20.1 The online application should be submitted as early as possible. Please do not wait for the last date.

20.2 The merit lists will be displayed showing the percentage of the applicants admitted in different disciplines against different categories on the notified date and time.

20.3 All documents to be attached with the Application Form (F-I) should be attested by a class-I gazetted officer of the government or a class-A officer of this University at the time of joining.

20.4 Any information regarding admissions can be obtained during working hours by calling Phone No: (051)9047412.

20.5 Members of the Admission Committee will also be available for consultation, in person, during the admission period.

21 Eligibility for Admission

i. He should be a resident of the area from where he seeks admission.

ii. He should meet standards of physique and eyesight laid down in the medical certificate.

iii. He should have appeared in the ECAT/ Equivalent Test for the respective session.

21.1 HSSC Examination

i. An applicant for admission to any of bachelor's degree course offered by the University must fulfil the requirements given in Table 21.1.

ii. He should have passed (or expect to pass) up to the latest annual examination with at least 60% unadjusted marks in the examination based on which he seeks admission. However, for admission in BS Computer Science the candidate obtained (or expect to obtain) at least 50% unadjusted marks will also be eligible. Marks of NCC and Hifze-Quran, where applicable, shall be added only for determination of merit and not towards eligibility. Rounding off percentage figure to make it 60% (or 50% in case of admission in CS) will not be considered towards eligibility.

Table 21.1

Sr. #.	Disciplines	HSSC/Equivalent Combination
1	All Undergraduate Engineering Programs of University	1. Mathematics, Physics and Chemistry 2. Mathematics, Physics and Computer Science
2	Computer Science	1. Any combination with Mathematics 2. Physics, Biology and Chemistry
3	Mathematics & Physics	Any combination with Mathematics and Physics

21.2 Equivalent Examination

The university recognizes the following examinations as equivalent to the Intermediate (Pre-Eng.) Examination with Chemistry, Mathematics and Physics of the Pakistan Boards of Intermediate and Secondary Education:

i. Intermediate (Pre-Eng.) Examination of the Board of Intermediate and Secondary Education, Azad Kashmir.

ii. Intermediate of the Agha Khan University Examination Board.

iii. Intermediate Examination of an HEC recognized / approved institution.

iv. FSc. (Pre-medical) with Mathematics as an additional subject.

v. *Cambridge Overseas Higher School Certificate of Education (Advanced Level) with Mathematics, Physics & Chemistry.

vi. *British General Certificate of Education (Advanced Level) with Mathematics, Physics, and Chemistry.

vii. *American High School Graduate Diploma (HSG Diploma).

viii. *Any foreign equivalent certificate or diploma accepted by IBCC (Inter Board Chairmen Committee). *Note:

Applicants (Sr. No. v to viii) are required to attach an equivalence certificate (Pre-Engineering) issued by the IBCC for percentage more than or equal to 60% in A-Level examination with relevant subject combinations, with the application for admission. The following is the address of the IBCC: Inter Board Committee of Chairmen, Plot No. 25, Street No. 39, G- 10/4, Islamabad, Pakistan.

***Note:** Applicants (Sr. No. v to viii) are required to attach an equivalence certificate (Pre-Engineering) issued by the IBCC for percentage more than or equal to 60% in A-Level examination with relevant subject combinations, with the application for admission.

The following is the address of the IBCC:
Inter Board Committee of Chairmen, Plot No. 25, Street No. 39, G-10/4, Islamabad, Pakistan.

21.3 Diploma of Associate Engineer (DAE)

(DAE) Diploma holders are eligible to apply on open merit, in any category according to Supreme Court decision on Civil Petition No. 271, 293, 617 dated October 18, 2021. Holders of the Diploma of Associate Engineer should have passed the diploma examination from the Punjab Board of Technical Education, Lahore in the relevant technology, obtaining at least 60% unadjusted marks. Rounding off percentage figure to make it 60% will not be considered towards eligibility. The relevant technologies are specified against each degree course given below:

Electrical Engineering

i. Automation
ii. Avionics
iii. Computer / CIT
iv. Electrical
v. Electronics
vi. Information
vii. Instrumentation
viii. Instrumentation & Process Control
ix. Mechatronics
x. Precision Mechanical & Instrument
xi. Radar
xii. Radio
xiii. Telecommunication

Electronics Engineering

i. Automation
ii. Avionics
iii. Bio-Medical
iv. Electrical
v. Electronics
vi. Instrumentation
vii. Instrumentation & Process Control
viii. Mechatronics
ix. Radar
x. Radio
xi. Telecommunication

Civil Engineering

i. Architecture
ii. Civil
iii. Civil with any specialization
iv. Environmental
v. Land & Mine Surveying

Mechanical Engineering

i. Aerospace
ii. Auto & Diesel
iii. Automation
iv. Bio-Medical
v. Dies & Mould
vi. Mechanical
vii. Mechanical (Automobile & Diesel)
viii. Mechanical (Construction Machinery)
ix. Mechanical (Foundry & Pattern Making)
x. Mechanical (Metallurgy & Welding)
xi. Mechanical with any specialization
xii. Mechatronics
xiii. Precision Mechanical &Instruments
xiv. Refrigeration & Air Conditioning
xv. Vacuum

Industrial Engineering

i. Auto & Diesel
ii. Automation
iii. Cast Metal & Foundry
iv. ndustrial
v. Mechanical

v. Mechanical (Construction Machinery)
vi. Mechanical (Production)

Computer / Software Engineering/CS

i. Automation
ii. Computer
iii. Computer Information
iv. Electrical
v. Electronics
vi. Instrumentation
vii. Instrumentation & Process Control
viii. Radar
ix. Radio
x. Software
xi. Telecommunication

Telecommunication Engineering

i. Automation
ii. Avionics
iii. Computer
iv. Computer Information
v. Electrical
vi. Electronics
vii. Instrumentation
viii. Instrumentation & Process Control
ix. Radar
x. Radio
xi. Software
xii. Telecommunication

Environmental Engineering

i. Chemical
ii. Civil
iii. Environmental

Note: The above list may be amended from time to time depending on the notification of PEC.

21.4 BSc Degree

i. A person is eligible for admission to the bachelor's degree courses at the University based on a degree of Bachelor of Science.
For admission to the BSc courses in any engineering discipline, an applicant must have passed the BSc Examination with Physics and Mathematics.
ii. A person possessing a BSc degree is NOT eligible for admission to any bachelor's degree course at the university unless he has also passed FSc. Pre-Engineering Examination.
iii. To be eligible for admission on the basis of BSc degree the candidate must have obtained at least 60% marks both in FSc and BSc.

21.5 Gender

Both male and female persons are eligible to apply for seats shown in the Seats Allocation Chart in section 22. The general pronoun "he" and its derivatives imply for either of the sex. Sections Categories.

22 Seats Allocation Chart

Number of seats allocated for various categories are tabulated below. Admission is granted in each category on merit, subject to eligibility under relevant Sections

	Categories	Civil	Electrical	Mechanical	Computer	Software	Telecom	Electronics	Industrial	Environmental	Computer Science	BS Physics	BS Math	Total
	Allowed intake	200	200	200	100	100	100	50	50	50	150	50	50	1300
A	Punjab	124	124	124	67	67	67	34	34	34	90	50	50	865
B	Sind	1	1	1										3
C	Balochistan	2	2	2										6
D	Khyber Pakhtunkhwa	1	1	1										3
	Azad Kashmir, Gilgit Baltistan, Balochistan & FATA													
E1	Azad Kashmir	2	2	1										5
E2	Kel Area	1												1
E3	Gilgit Baltistan	2	2	2	1	2	3		1					13
E4	HEC Nominees from Balochistan & FATA	4	4	4	2	2	2	1	1	1				21
E5	FATA (over & above PEC quota)	2	2	2	1	1	1	1	1	1				12
	Foreign Nationals													
F1	Foreign Countries by EAD	3	3	3										9
F2	Afghan Nominee (Refugee) by EAD	1												1
F3	Bangladesh Nominees by EAD	1	1	1										3
F4	Indian Held Kashmir (over PEC quota), EAD	3	2	2	1	1								9
F5	Muslim Nominee from Srilanka (Distt. Kandy)		1											1
F6	Afghan Nominee (PM Directive) by HEC	5	5	5	5									20
F7	Gambian Nominees by HEC	1	1	1	2	1		1	1					8
F8	Srilankan Nominees (over PEC quota), HEC	2	1	1	1									5
	Children of Armed Forces Personnel													
G1	ARMY	1	2	1										4
G2	AIR FORCE		1											1
G3	NAVY			1										1
	Other Categories													
J	Disable Persons					2								2
*L	Bakward Districts of Punjab	1		1										2
M	Children of Univ. Employees	2 per section or 6 per department which ever is greater, except CS												30
N	Children of Graduate Engineer	1	1	1										3
O	Children of University Alumni			1										1
Q1	Tribal Areas of DG Khan		1											1
Q2	Tribal Areas of Rajanpur	1												1
T	Tehsil Taxila		1	1										2
R	Relegious Minorities (over PEC quota)	4	4	4	2	2	2	1	1	1				21
S	All Pakistan (Partial-Subsidized)	38	38	38	15	15	20	10	10	10	50			244
X	Overseas Pakistanis (Partial-Subsidized)	5	6	4	5	8	5	3	2	4	7			49
	Total	200	200	200	100	100	100	50	50	50	150			1347

*L 1. Attock, 2. Bahawalnagar, 3. Bahawalpur, 4. Bhakkar, 5. Chakwal, 6. D.G. Khan, 7. Jhang, 8. Jhelum, 9. Layyah, 10. Muzaffargarh, 11. Mianwali, 12. Rahim Yar Khan, 13. Rajanpur

Notes:

1. The number of seats allocated for a program and categories may be revised/modified without prior notification.

2. *Fees is Subsidized for all categories except **'S'** and **'X'.** Moreover no any relaxation, concession or waiver in fee of 'S' and 'X' categories is available.*
3. *In Computer Science one third of seats of every category are reserved for candidates of HSSC with Pre-Medical combination (Category AM) and remaining seats of every category are reserved for other HSSC combinations. In case seats of either group remains unfilled due to non-availability of candidates the quota will be transferred to other group.*

23 Categories and Symbols

23.1 Category A (Punjab Province)

The applicant should be a resident of the Punjab province. The selection and allocation of disciplines are made according to merit.

23.2 Category B (Sindh Province)

The applicant should be a resident of the Sindh province. Applications for civil engineering are to be submitted to the Registrar of the Mehran UET, Jamshoro. For electrical and mechanical engineering apply to the Registrar of N.E.D. UET, Karachi. The last date for receipt of nominations at UET, Taxila (irrespective of the mode of communication or the date of postage) is 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations. Nominations and allocation of disciplines are made by the Department of Education, Government of Sindh, Karachi.

23.3 Category C (Balochistan Province)

The applicant should be a resident of the Balochistan province. Applications are to be submitted to the Secretary, Department of Education, Government of Balochistan, Quetta. Nominations and allocation of disciplines are made by this Department. The last date for receipt of nominations at UET, Taxila (irrespective of the mode of communication or the date of postage) is 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations. Diploma holders are not eligible to apply in this category.

23.4 Category D (Khyber Pakhtunkhwa Province)

The applicant should be a resident of the Khyber Pakhtunkhwa Province. Applications are to be submitted to Registrar, UET, Peshawar. Nominations and allocation of disciplines are made by the Department of Education, Government of Khyber Pakhtunkhwa, Peshawar. The last date for receipt of nominations at UET, Taxila (irrespective of the mode of communication or the date of postage) is 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations.

23.5 Category E1 and E2 (Azad Kashmir and KEL Area)

The applicant for the Azad Kashmir and Kel Area seats should be a national of Azad Kashmir. For the seats reserved for Azad Kashmir and Kel Area, applications are to be submitted to the Secretary Education, Azad Jammu & Kashmir, Government of Muzaffarabad. Nominations and allocation of disciplines are made by the Nomination Board for the Azad Kashmir. The last date for receipt of nominations at UET, Taxila (irrespective of the mode of communication or the date of postage) is 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations.

23.6 Category E3 (Gilgit/ Baltistan)

The applicant for the Gilgit Baltistan seats should be resident of these areas. For these reserved seats the applications are to be submitted to the Director of Education, Gilgit Baltistan. Nominations and allocation of disciplines are made by the Nomination Board for the Gilgit Baltistan. The last date for receipt of nominations at UET, Taxila (irrespective

of the mode of communication or the date of postage) is 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations.

23.7 Category E4 (HEC Nominees from Baluchistan and FATA)

The applicant should be a resident of the Baluchistan province or FATA. Applications are to be submitted to the Higher Education Commission (HEC), Islamabad. Nominations and allocation of disciplines are made by HEC. The last date for receipt of nominations at UET, Taxila (irrespective of the mode of communication or the date of postage) is 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations.

23.8 Category E5 (FATA)

The applicant should be a resident of the Federally Administered Tribal Areas (FATA). The applications are to be submitted to the Home and TAs Department, Government of Khyber Pakhtunkhwa, Peshawar. Nominations and allocation of disciplines are also made by this department. The last date for receipt of nominations at UET, Taxila (irrespective of the mode of communication or the date of postage) is 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations.

23.9 Category F (Foreign Nationals)

Applicants from category F1 to F5 are required to get their applications sponsored by their government, and sent in triplicate to the Ministry of Finance, Revenue, Economic, Statistics and Privatization (Economic Affairs Division), Government of Pakistan, Islamabad, through the Pakistan's representative accredited to their country. The applications should be accompanied by the following documents:

i. Educational Certificates (attested photocopies) and details of syllabi and courses of study of the examinations passed with English translation if these are in a different language.
ii. Domicile/Nationality Certificate
iii. Passport
iv. Character Certificate
v. Health/Fitness Certificate

Information regarding the class and discipline in which admission is required. Nominations/Allocation of disciplines is made by the Ministry of Finance (Economic Affairs Division) Islamabad. The prescribed application forms may be obtained from the ministry.

The applicants of category F6 to F8 are required to submit their applications through HEC Islamabad, Pakistan.

23.10 Category G (Children of Armed Forces Personnel)

Applications are to be submitted to the Headquarters of the Army, Air Force, or the Navy (depending upon the service to which the parent belongs) in accordance with the procedure notified by them. Diploma holders are not eligible to apply in this category. The last date for receipt of nominations at UET, Taxila (irrespective of the mode of communication or the date of postage) is 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations. Nominations and allocation of disciplines are made by the respective Headquarters.

23.11 Category J (Disable Persons)

The applicant should be a resident of Punjab Province. The applicants will have to furnish a certificate from Concerned Social Welfare, Women Development and Baitul Maal (Provincial Council for the Rehabilitation of Disabled Persons), Government of Punjab or Federal Government. Verification of his

disability in view of provided certificate in relation to engineering education will be done by the Chief Medical Officer, UET, Taxila. The selections are made by the University according to merit. The blind, deaf and dumb persons are not eligible to apply in this category.

23.12 Category L (Backward Areas of Punjab)

The backward areas of Punjab include districts of Attock, Bhakkar, Bahawalnagar, Bahawalpur, Chakwal, D.G. Khan, Jhang, Jhelum, Layyah, Mianwali, Muzaffargarh, Rahim Yar Khan and Rajanpur. The applicant should be a resident of any of these districts. The selection and allocation of disciplines are made by the university according to merit.

23.13 Category M (Children of University Employees)

Real children of those university employees who have completed five years of service being physically present are eligible to apply as per following details.

i. The first 7 seats are allocated to the wards of employees who were appointed before 1993 (the inception of UET, Taxila) for the programs being offered at that time. If these seats are not filled due to unavailability of wards of such employees, the seats shall be open for admission of the wards of employees who were appointed after the establishment of the university in the year 1993.

ii. The remaining seats of this category shall be open for all the employees of UET, Taxila.

iii. The applicants must furnish with their applications a certificate from the Registrar of the University on Form F-IX (available in Registrar's office).

The selection is made by the university according to merit.

Notes:

1. The children of those university employees are not eligible to apply under this category who have been dismissed/terminated/removed from the university on any ground except medical grounds or have left the university other than the retirement.
2. Candidates once admitted in previous sessions under this category in the university or in its affiliated institutes will only be considered in current session after the exhaustion of fresh candidates, subject to the availability of seats. Admission will be granted on the merit position of candidates without taking care of 1993 bar.

23.14 Category N (Children of Graduate Engineers)

The applicant should be a resident of the Punjab province. The selection and allocation of disciplines are made by the university according to merit. Applicants should furnish with their applications attested photocopies of their parent's Bachelors' Degree in Engineering and renewed PEC Registration card. Other qualifications such as AMIE (Pak) are not recognized for inclusion in this category.

23.15 Category O (Children of University Alumni)

The applicant should be a ward of university alumni. The applicant should furnish with his application an attested photocopy of the Degree/ Provisional Certificate of his parent as an evidence of the fact that he (the parent) is a graduate of this University or its parent institution, that is, the former University College of Engineering Taxila. The selection and allocation of disciplines are made by the University according to merit.

23.16 Category Q1 (Tribal Areas of D.G. Khan)

The applicant should be a resident of the Tribal Areas of D.G. Khan. The selection and allocation of disciplines are made by the University according to merit. Applicant must furnish a certificate from the District Coordination Officer of DG Khan

verifying that he is a resident of the Tribal Areas of D.G. Khan District and his domicile should also depict the same.

23.17 Category Q2 (Tribal Areas of Rajanpur)

The applicant should be a resident of the Tribal Areas of Rajanpur. The selection and allocation of disciplines are made by the University according to merit. Applicant must furnish a certificate from the District Coordination Officer of Rajanpur verifying that he is a resident of the Tribal Areas of Rajanpur District and his domicile should also depict the same.

23.18 Category T (Tehsil Taxila)

The applicant should be a resident of Tehsil Taxila. The selection and allocation of disciplines are made by the university according to merit.

23.19 Category R (Religious Minorities)

The applicant should be a resident of Punjab and having a non-Islamic religion. He must have to provide a valid document stating his religion.

23.20 Category S (Partial Subsidized)

The applicant should be a Pakistan National. However, candidates from Punjab province will be given preference over other provinces. Selection and allocation of disciplines are made according to merit. The fee is partial subsidized for this category.

23.21 Category X (Children of Overseas Pakistanis, Partial Subsidized)

Applicant should be a ward of overseas Pakistani. Selection and allocation of disciplines are made by the University according to merit. The fee is partial subsidized for this category. The applicant is required to submit along with his application:

i. A certificate on Form F-VIII (can be downloaded from the university website) regarding his parent's employment in a foreign country issued by the Pakistani Embassy in that country.

ii. A photocopy of his parent's valid resident visa for that country attested by the Pakistani Embassy.

Notes:

1. Only real children of overseas Pakistanis are eligible to apply. However, in case of an orphan, he may apply on his guardian's documents. Guardian can be real brother, real paternal or maternal uncle. In this case following additional documents are required:
   (i) Father's death certificate issued by NADRA (ii) Proof of relationship with the guardian in the form of CNIC of all family members and NADRA Family Registration Certificate (FRC) highlighting the Tree structure of the applicant (iii) Copy of Nikahnama in case the guardian is the maternal uncle of the applicant.
2. Scanned / photocopied / Faxed documents will not be accepted. Only original attested copies from the concerned Pakistani embassy will be accepted.
3. The residence permit / visa must be valid at least up till the closing date of submission of applications.

24 Determination of Merit

24.1 Examinations Considered for Merit

For admission to all the bachelor's degree courses and determination of merit the following examinations are considered:

i. Higher Secondary School Certificate Examination (HSSC) Pre-Eng. or equivalent.
ii. Bachelor of Science (BSc) or BASc.
iii. Diploma of Associate Engineer.
iv. SSC (Matric)
v. Entry Test.

24.2 Weighted Percentage

The comparative merit of applicants will be determined based on weighted percentage marks obtained by the candidates in these examinations.

a. For Applicants with HSSC (Pre-engineering) or equivalent foreign qualifications (A-Level etc.) as the Highest Qualification:

Entry Test	33%
SSC	50%
HSSC (Part-I)	17%

b. For Applicants with BSc OR BASc as the Highest Qualification:

Entry Test	33%
SSC	17%
HSSC (Part-I)	20%
BSC	30%

c. For Applicants Having Diploma of Associate Engineer as the Highest Qualification:

Entry Test	33%
SSC	17%
DAE 1st & 2nd Year	50%

d. In case of foreign qualifications (A-Level etc.) :

Entry Test	33%
O level	67%

e. For admission in BS Mathematics and BS Physics

SSC	30%
HSSC (Part-I)	70%

Notes:

1. In case the candidate has already completed his/her intermediate or equivalent qualification, their Part-I result would be used in computation of aggregate.
2. In case of foreign qualification, letter grade will be converted to marks by IBCC formula.
3. Since admission is offered before the declaration of result of HSSC part-II and other equivalent examinations, therefore, admission of candidates, who are unable to earn 60% or above in their HSSC or equivalent qualifications or DAE, will be cancelled and their dues will be reimbursed in full without any deduction.

24.3 Merit of FSc (Pre-medical) with Mathematics

In determining the merit of an applicant having FSc (Pre-medical) with Mathematics as an additional subject, the marks obtained in the subject of Biology are replaced by those obtained in Mathematics.

24.4 Credit for NCC

Twenty marks are added to the marks obtained in the highest examination of an applicant who has successfully completed the NCC training. An applicant gets the benefit only if he submits with his application an attested photocopy of the original certificate issued by the Director General National Cadet Corps & Women Guard. No substitute for the original certificate is recognized.

24.5 Credit for Hifz-e-Quran

Twenty marks are added to the marks obtained in the highest examination of an applicant who is Hafiz-e-Quran. He gets the benefit only if he:

a. fills in the necessary column provided in the online application Form (F-I)
b. appears before the "Verification Committee" appointed by the Vice-Chancellor and the Committee accepts his claim of being a Hafiz-e-Quran.

The Verification Committee will meet for this purpose in the Jamia Mosque Bilal UET, Taxila on the notified date and time. No separate call letters will be issued in this connection.

24.6 Determination of Merit in case of Equal Percentage of Admission Marks

In case of Equal Percentage of Admission Marks If two or more applicants have equal percentage of admission marks (up to three decimal places), they shall be treated at par for

the purpose of admission. Explanation: In case there is a tie for the last seat in a Discipline/Category, then all the candidates who have secured equal percentage of Admission Marks (up to three places of decimal) shall be admitted. No transfer or new entry into that Discipline/ Category shall, however, be considered unless the actual number of candidates already admitted falls below the number of allocated seats for the Discipline/ Category.

24.7 Merit Determined Category Wise

The seats for admission to the bachelor's degree courses at the university are distributed over various categories. These categories are discussed in Section 23. The details are available in the Seats Allocation Chart in Section 22. The eligible applicants for each category are grouped separately. Then based on the weighted percentage of marks obtained in the relevant examinations, comparative merit of the applicants comprising the group is prepared. The applicants belonging to a category thus compete for admission amongst themselves for the seats allocated to it.

24.8 Transfer based on given Preferences and Merit

a. **Transfer to higher preferences**

In case a seat in any Discipline/ Category of higher preference given by a candidate falls vacant and he is eligible for transfer to that Discipline/ Category based on his merit, he shall be automatically transferred to that Discipline/Category. He will have no right to retain his admission in the Previous Discipline/Category because the seat vacated by him shall be simultaneously allotted to the next eligible candidate on merit.

b. **Downgrading based on Preferences and Merit:**

If an applicant requests in writing on the prescribed form to downgrade his admission to the lower preference, he will be allowed to avail this facility only once depending on the merit and availability of seats in that department. Further his admission will be frozen simultaneously to the downgraded discipline/ category.

24.9 Freezing in any given Discipline and Category

If an applicant requests in writing to retain the discipline and category in which he has been selected for admission on merit, then he will not have any right to claim his admission in any other discipline and category of higher or lower merit even if a seat falls vacant in any discipline. Applicant desiring to freeze category / discipline must have to apply in person on the prescribed form for this purpose.

24.10 Variation in Seats

a. The university authorities may exercise their right before the closing of the admission cycle to increase or decrease the number of seats allocated to any category and there shall be no appeal against such a decision.

b. All candidates eligible for admission under M-category will be admitted within the prescribed upper limits of M Category in each program. The remaining seats will be made available for open merit admissions.

c. Unfilled seats due to unavailability of applicants in the category 'X' will first be transferred to category 'S'.

d. Unfilled seats due to unavailability of applicants in the categories J, L, M, N, O, Q1, Q2, T and S will be transferred to open merit seats (category 'A')

24.11 Typical Examples for the Calculation of Weighted Percentage for Admission

CASE 1:

Applicants having HSSC (F.Sc.) or Equivalent as the highest qualification

Formula:

[33 × (Entry Test marks/Entry Test total

marks) + 17 x (SSC Mars / SSC total Marks) + 50 × (HSSC-Part-I marks + NCC + HIFZ-E-QURAN)/ (HSSC Part-I total marks)]

Example

An applicant who has obtained 300/400 in Entry Test, and 700/1100 in SSC, 500/550 in HSSC-Part-I. He has obtained Haifz - E - Quran Certificate as well. % Admission Marks = [33 × (300/400) + 17 × (700/1100) + 50 × (500 +20)/550)] = 82.841

CASE 2:

Applicants having BSc as the highest qualification

Formula:

[33 × (Entry Test marks/Entry Test total marks) + 17 x (SSC Mars / SSC total Marks) + 20 x (HSSC part-I marks/HSSC Part-I total marks)] + [30 × (BSc marks + NCC + HIFZ-E-QURAN)/ (BSc total marks)]

Example:

An applicant who has obtained 700/1100 in SSC, 400/520 marks in HSSC, 624/800 marks BSc and 284/400 marks in Entry Test, having also NCC certificate: % Admission Marks = [33 × (284/400) + 17 × (700/1100) + 20 × (400 /550) + 30 × (624 + 20 + 20)/800)] = 72.94

CASE 3:

Applicants having Diploma of Associate Engineer as the highest qualification.

Formula:

[33 × (Entry Test marks/Entry Test total marks) + 17 x (SSC Mars / SSC total Marks) + 50 × (Diploma 1st and 2nd year marks + NCC + HIFZ-E-QURAN)/ (Diploma total marks)]

Example

An applicant has 800/1100 in SSC, 240/400 marks in Entry Test, and 1700/2000 marks in Diploma. % Admission Marks = [33 × (240/400) + 17 × (900/1100) + 50 × (1700/2000)] =76.209

25 Merit Position Entry – 2022

Sr.	Department	A	J	L	N	O	Q1	Q2	R	S	T	X
		Open Merit	Disable Persons	Backward Areas	Engineer's Children	Alumni	DG-Khan (Tribal)	Rajanpur (Tribal)	Religious Minorities	Partial-Subsidized	Tehsil Taxila	Overseas
1.	Software	75.278	71.383						61.159	64.004		44.416
2.	Mechanical	68.295								51.477	69.751	
3	Civil	66.958		69.274	61.599				56.620	50.168		
4	Computer Sc.	72.305								43.226		46.307
5.	Computer	68.326								48.518		
6.	Electrical	65.199		66.896	60.245	41.094	63.606			49.235	66.666	
7.	Electronics	57.141								53.927		
8.	Telecom	61.781								62.264		
9.	Industrial	54.126										
10	Environmental	48.547										
11	Computer Sc. (Pre-Medical)	53.785										

26 Domicile Requirements

26.1 Domicile Certificates to be submitted by All Applicants

All applicants are required to submit with their applications an attested photocopy of their domicile certificate failing which their applications shall not be considered for admission.

26.2 Applicants Required to Submit Additional Documents

Applicants for categories A, J, L, N, 'G'. Q1, Q2, and T who have passed the Higher Secondary School Examination from any Board of Intermediate and Secondary Education not included in the Punjab Province or Federal Capital Area, Islamabad, will have to submit additional documents described in section 26.3 in support of their domicile.

26.3 Additional Documents Required

The applicants who are required to submit additional documents may fall into the following three categories:

a. Children of Government Servants

If the parent of the applicant is a government servant who belongs to Punjab but is serving in any other province of Pakistan, then the parent should produce a certificate on Form F-II (can be downloaded from admissions. uettaxila.edu.pk) from the head of his department affirming that he is a permanent resident of the Punjab. It shall be necessary in such cases that the period of the applicant's study corresponds with the period of the posting of the parent in that province.

b. Others

Applicants other than those at para must submit the following additional documents in support of their domicile certificate

i. An attested Photocopy of father's/ mother's domicile certificate of the Punjab Province or the Federal Capital Area, Islamabad.

ii. Documentary Proof in the form of a certificate on Form F-III (can be downloaded from university website) from the election officer of concerned area of the Punjab Province/ Federal Capital Area, Islamabad to the effect that name of the father/mother of the applicant appears in the electoral rolls.

iii. An attested Photocopy of the relevant page of the electoral rolls on which the name of the father/ mother of the applicant appears.

iv. An attested Photocopy of the identity card of the applicant's father/mother.

v. An undertaking from the candidate on Form F-IV. (Can be downloaded from admissions. uettaxila.edu.pk)

c. Applicant Whose Father is not Alive

In case the applicant's father is not alive and the above documents cannot be produced, the applicant should submit

i. Documentary evidence of his father's/ mother's immovable property in Punjab or Federal Capital Area, Islamabad.

ii. Documentary proof of his father's death.

26.4 Domicile Requirements for Children of the Armed Forces Personnel

In addition to the seats reserved for the category 'G', the children of the Armed Forces personnel can apply for admission on basis of merit against seats reserved for their province of domicile or the seats reserved for the province in which their parent (the member of the Armed Forces) is posted. Thus, an applicant who is domiciled in Sindh, but his parent is posted in Punjab can apply against seats reserved for Sindh or against seats reserved for Punjab. However, if he applies under category 'A', he will have to submit with his application a certificate from the GOC of the area regarding the place of his parent's posting.

27 Documents to be attached with Form (F-I)

An applicant must exercise great care in ensuring that his application form (F-I) is complete and submitted online on or before the closing date. If an applicant secures admission in a particular merit list, he will have to submit the following documents along with the printout of application form (F-I) when he will report to the admission office for joining:

27.1 Documents to be submitted by All Applicants: (Attested Photocopies)

i. CNIC/FORM-B Documents to be attached with Form (F-I)
ii. Certificate of Secondary School Examination (Detailed Marks Certificate).
iii. Degree, Diploma or Certificate of the examination based on which admission is sought (i.e., FSc, BSc, or DAE etc.). Result cards issued by the board/ university are acceptable. Provisional Certificate in place of Degree/ Diploma will not be accepted.
iv. Detailed Marks Certificate of the examination based on which admission is sought.
v. Domicile Certificate.
vi. Entry Test result.

27.2 Additional Documents (Mandatory)

To whom applicable:

i. If you have passed HSSC (Pre-medical), you must submit an attested photocopy of the certificate for additional Mathematics.
ii. If you are seeking admission based on BSc Degree you must submit an attested photocopy of the HSSC Certificate as well.
iii. If you are applying for 'J' category seats, you must submit a certificate from concerned Social Welfare, Women Development and Bait ul Maal (Provincial Council for the Rehabilitation of Disabled Persons) Government of the Punjab or Federal Government.
iv. If you are applying for 'M' Category seats, you must submit in original a certificate from the Registrar of the university on prescribed Form F-IX (Available in the Registrar's office).
v. If you are applying for the 'N' Category seats, you must submit an attested photocopy of the relevant degree of your father or mother and renewed PEC registration Certificate.
vi. If you are applying on 'O' category seats, you must submit an attested photocopy of the educational degree/ certificate of your parent as evidence of the fact that he (parent) was a graduate of this university or its parent institution, i.e., the former University College of Engineering Taxila.
vii. If you are applying for Q1 or Q2 category seats, you must submit a certificate from the District Coordination Officer verifying that he is a resident of the tribal areas of respective districts.
viii. If you are applying for 'R' category seats, you must submit an undertaking duly attested by Oath commissioner on Rs. 50 stamp paper, affirming that you belong to the scheduled religious minority non-Islamic group.
ix. If you are applying on 'X' category seats, you must submit
    a) A Certificate on Form F-VIII (can be downloaded from university website) regarding his parent's employment in a foreign country issued by the Pakistani embassy in that country.
    b) A photocopy of his parent's valid resident visa for that country attested by the Pakistani Embassy.
    c) In case of orphan visit section 23.22 for information about additional documents required.
x. If you have successfully completed the NCC training and wish to claim 20 marks you must submit an attested photocopy of the certificate issued by the Director General National Cadet Corps and Women Guards.

xi. If you are claiming 20 marks for being Hafiz-e-Quran, read clause24.5 of the prospectus carefully.

xii. If you are son of Armed Forces Personnel and are seeking admission not against the seats reserved for the province of your domicile but against the seats reserved for the province where your parent is posted, you must submit in original certificate from the GOC of the area about the place of your parent's posting.

xiii. If you are applying for any category requiring the Punjab domicile and you have passed the Higher Secondary Examination from a Board or Institution not included in the Punjab/Federal Capital Area, Islamabad, you should read section 26.2 and 26.3 carefully to find out the additional documents, you must submit along with Form F-I.

28 How to Complete and Submit the Application Form (F-I)?

Only online filled application forms will be accepted. A candidate can fill the application form (F-I), available online at:

admissions.uettaxila.edu.pk

While filling the FORM (F-I) please read the following instructions carefully:

Instructions for Online Filling of Application Forms:

- On the web-link admissions.uettaxila.edu.pk, click on My UET button.
- Enter your CNIC/B Form No. issued by NADRA, set password, and then click Register button for registration with UET to access the application Form.
- The Candidate can Sign in now.
- Fill the personal information, applicable options, educational information, and preferences and submit it online.
- The candidate can sign in again and again to see/edit his/her data until the closing date of submission of application forms online. After that editing access will be disabled.

28.1 Separate applications are required to be submitted for Group 01 and Group 02 programs along with a specific application processing fee.

28.2 All entries should be in BLOCK LETTERS.

28.3 Fill the column for preferences very carefully. The order of preferences once given shall be final and cannot be changed subsequently, after the submission of the application form online.

If any change in preference order or correction of information in the submitted application is desired by any candidate; it can only be done by withdrawal of current application and to file a fresh application with new registration fee.

28.4 Under Column 'Disciplines' use the following abbreviations:

Civil Engg.	Civil
Computer Engg.	Computer
Electrical Engg.	Electrical
Electronics Engg.	Electronics
Mechanical Engg.	Mechanical
Software Engg.	Software
Telecom Engg.	Telecom
Industrial Engg.	Industrial
Environmental Engg.	Environmental
Computer Science	Computer Science
Computer Science	Computer Sc

28.5 Under the Column 'Category' the candidate will choose only among 'A' (open merit), 'S' (partial subsidized) or 'X' (children of oversees Pakistani). The other categories will be adjusted automatically depending upon his applicable options.

For Example:

A candidate whose father is an engineer, alumnus of UET, Taxila and the candidate also belongs to the Tehsil Taxila and his first choice is Mechanical Engineering then ideal way to fill preferences is as follows:

Sr. No.	Discipline	Category
1.	Mechanical	A
2.	Mechanical	N

3.	Mechanical	T
4.	Civil	A
5.	Civil	N
6.	Electrical	A
7.	Electrical	N
8.	Electrical	T
9.	Electrical	O
10.	Mechanical	S
11.	Civil	S

and so on.

- 1st preference is Mechanical open merit.
- 2nd preference is Mechanical for engineer's son seats.
- 3rd preference is Mechanical Tehsil Taxila.
- 4th preference is Civil open merit.
- 5th preference is Civil for Engineer's son seats.
- 6th preference is Electrical for open merit.
- 7th preference is Electrical for engineer's son seats.
- 8th preference is Electrical for Tehsil Taxila.
- 9th preference is Electrical for children of university alumni seats.
- 10th preference is Mechanical in partial subsidized category.

28.6 Deadline for Receipt of Applications

The application form complete in all respects should be submitted online on or before the last date notified for submission of applications.

28.7 Incomplete Applications

Incomplete applications shall not be entertained, and application fee shall also not be returned on any ground.

29 Procedure for the Selected Candidates

29.1 Notification of Selection

Admissions are granted on merit and according to preferences given by the applicants.

A list of selectees will be displayed on official University website (admissions.uettaxila.edu.pk). The applicants can check the merit lists according to the schedule given in Section 33.

29.2 Depositing of Dues and Documents

- If the name of applicant appears in the merit list, he will report to Admission Office within the prescribed time limit for the particular merit list.
- He will submit the printout of application form F-I along with documents mentioned in section 27 of the prospectus. His eligibility will be determined according to the eligibility criteria for a discipline/ category laid down in the prospectus.
- **The admission offers to "Not Eligible" candidates will be cancelled whereas the "Eligible" candidates will be issued call letters and bank challan.**
- After depositing fee in HBL, UET, Taxila branch the candidate will submit the following documents in the Admission Office within the time period of a particular merit list:

i. Bank Challan receipt in support of the University Dues deposited in the Habib Bank Ltd., UET, Taxila Branch
ii. Medical Certificate (F-V) duly signed and stamped by the District Medical Superintendent or the Medical Officer of the university or a Commissioned Medical Officer
iii. Original degrees, certificates, and result cards of SSC, HSSC, BSc, GCE(A), Diploma of Associate Engineers or the equivalent qualifications and their duplicate attested photocopies
iv. Original Marks Sheet of Entry Test
v. Original NCC certificate (If applicable)
vi. Original Domicile certificate
vii. Attested copy of National CNIC/Form B
viii. Bio-Data Sheet (F-VI) duly completed.
ix. Undertaking (F-VII) on a Stamp Paper of Rs. 50/-

Important: Consideration in next merit lists: Admissions are granted on merit and according to

preferences given by the applicants. An applicant who secures admission in a discipline of his lower preference and he desires to be considered in next merit lists, MUST submit all the UNIVERSITY dues and ORIGINAL documents. If he fails to do so, his name would be excluded from any future merit lists and his admission would be cancelled.

29.3 Relaxation in Time Limit

If a selectee is prevented by unavoidable circumstances from timely fulfillment of the requirements laid down in 29.1 and 29.2, he should intimate the Convener Admission Committee about it within the prescribed time limit along with relevant documentary proof. The Convener Admission Committee may, at his discretion, grant relaxation in the time limit, which shall not exceed Three days.

29.4 Forfeiture of Right for Admission

A selectee who fails to fulfill the requirements laid down in 29.1 and 29.2 within the prescribed time limit shall forfeit his right of admission and will not be considered in subsequent merit lists.

However, such candidates may be considered as per following:

Initially they will be offered admissions in the disciplines in which their names appeared 1st time in merit list at the end of the current merit list, based on merit and subject to the availability of seat **and on submission of fresh application processing fee.** Moreover, they will be eligible to be transferred in the disciplines of their higher preferences, if further merit lists are displayed.

29.5 Provisional Admission

On fulfillment of the obligations mentioned in 29.1 and 29.2 a selectee will be admitted to the university. This admission shall however, be 'provisional 'until all the original degrees or certificates, submitted by him, have been verified for their veracity. In case any document proves to be false, fake, fabricated or do not comply towards eligibility criteria mentioned in section 21 found at a later stage, a provisionally admitted student shall be liable to expulsion from the university and to any other disciplinary or legal action the university may deem fit. Moreover, all the fees and charges deposited by him shall stand forfeited in favor of the university.

29.6 Notification of Selection of Categories B, C, D, E, F, and G

The applicants for the seats reserved for these categories will be informed about selections by the authority responsible for their selection. After that the university will issue them call letters with a target date to report in the Admission Office to complete the remaining admission formalities.

29.7 THE ADMISSION MADE AS A RESULT OF AN ERROR, OMISSION OR MISTAKE SHALL NOT CONFER ANY RIGHT OF AN APPLICANT

29.7 Late Admission

The students who will join after the mid semester examinations of 1st semester (because of late nominations and/or 2nd, 3rd cycles of admissions) will be awarded "W" grade in all subjects of the result at the end of 1st semester of his regular session and their makeup classes will be arranged by the respective Chairman after the 1st semester examinations. The mid semester and end semester examination will be taken afresh of all such students and their result will be forwarded by the Chairman to the Controller of Examinations later. The result of 1st semester of such students will be revised by the Controller of Examinations.

29.8 Withdrawal of Original Documents:

The student may be allowed to withdraw their original documents (SSC/HSSC/Domicile) for some other use/purpose but he will not be allowed to withdraw all three original documents (SSC/HSSC/Domicile) at one time. At least one of his original documents will be retained in admission office as security deposit. In this regard the student will submit a written request to the convener admission stating the purpose (with documentary proof), duration and date of return duly signed by the respective chairman.

29.9 THE ADMISSION MADE AS A RESULT OF AN ERROR, OMISSION OR MISTAKE SHALL NOT CONFER ANY RIGHT OF AN APPLICANT

30 Fees and other Charges

30.1 The fees and charges to be paid by the students admitted to the bachelor's degree courses are mentioned in Table 30.1. The same are subject to revision/ modification by the University authorities at any time without any prior notification.

Table 30.1

Description	Subsidized (All categories except S & X)	Partial-Subsidized (only S and X)
Non-Recurring (Payable at the time of admission)	(Pak. Rupee)	(Pak. Rupee)
Admission Charges	6000	60,000
*Re-admission Charges	4000	4,000
Registration Charges	3000	3,000
Library Security (Refundable)	2000	2,000
Students Bus Card Charges	500	500
Students Identity Card Charges	500	500
**Survey Camp Charges (for Civil Engg. only)	8,000	8,000
Additional for Hostel Resident		
Hostel Security (Refundable)	5000	5,000
Mess Security (Refundable)	5000	5,000
Service & Contingencies	3000	3,000
Recurring Charges (per semester)		
Tuition Fee	35000	135,000
Tutorial Charges	1000	1,000
Sports Charges	2000	2,000
Magazine Charges	1000	1,000
Medical Charges	3000	3,000
Laboratory Charges	3000	3,000
Examination Charges	2500	2,500
Book Bank Rent	700	700
Instructional Tour Charges	3000	3,000
Recreation Charges	2000	2,000
Bus Fare for Resident	4000	4,000
Bus Fare for Non-Resident	15800	3,000
Smart and Safe Campus Charges	3000	3000
Additional for Hostel Resident		
Room Rent	5000	5,000
Electricity charges	5000	5,000
Sui Gas charges	1300	1,300
Masjid Fund	500	500
Total for First Semester (Resident)	**97000**	**251,000**
Total for Remaining Semesters (Resident)	**72000**	***172,000
Grand Total (Resident)	**601000**	**1,455,000**
Total for First Semester (Non-Resident)	**84000**	**238,000**
Total Remaining Semesters (Non-Resident)	**72000**	**172,000**
Grand Total (Non-Resident)	**588000**	**1,442,000**

* *Only in case of Re-admission.*

** *These additional charges will be paid with the fee of 2nd, 3rd & 4th Semesters by Civil Engineering students only*

*** *Those candidates who have paid Rs 623,000/- as a*

first semester fee will pay Rs 117,000/- in subsequent semesters.

Notes:

1. *In case of admission withdrawal Admission charges will not be refunded.*
2. *In case a candidate of 'S' or 'X' category is promoted to some other subsidized category, during admission cycle, than the total fee/charges deposited by him/her will be adjusted for next subsequent semesters.*

30.2 For different type of certificate fees and other examination related charges, contact Examination Branch.

30.3

i. The University also grants fee concession on merit as well as need basis.

ii. Students should maintain their own personal record of original receipts of dues till clearance including receipt of refundable security to avoid problems in future. Non-production of original dues receipts on demand can be considered as non-deposit of fee.

iii. All the admitted students are advised to open their bank accounts in Habib Bank Limited at UET Taxila branch.

30.4 The Chairman of the concerned department may grant extension in payment of dues to the needy students on cogent reasons recorded in writing for a maximum period of 30 days beyond the schedule of the dues circulated by Treasurer. He may also allow the payment of dues in two installments. The remission of late fee fine or re-admission fee cannot be waived off if extension is not allowed by the Chairman beyond the extension period. However, the Competent Authority can waive off late fee fine, on the provision of special case.

If such student fails to deposit the fee upto expiry of this extension, then all relevant clauses starting from 30.10d and onwards will be applicable (Semester Registration/ Fee).

30.5 University dues received in favor of students under loan scheme of National Bank of Pakistan will be adjusted against his/her outstanding dues. In case, the university has extended fee concession to a student, the same will not be withdrawn. The amount equal to fee concession will be paid to the concerned student to enable them to return the amount to NBP themselves to reduce their loan liability.

30.6 Financial assistance / Scholarship received from UET or any other agency/organization, the fee will be adjusted for his/her outstanding dues. The amount will not be refunded to the student. In case he/she has already been granted Half/ Full fee concession for the said period, it will stand canceled automatically and he /she will deposit the fee concession amount in favor of the university or financial assistance will be adjusted against outstanding dues. Student can avail one financial assistance/ scholarship from any agency at a time.

30.7 Periods of Fees and Other Charges

The Non-Recurring fee are charged at the time of admission while the recurring fee are charged per semester. The hostel charges are payable for the whole semester. Electric heaters are **not allowed** in hostel room for all students. A hostel resident found in violation of the rule by using heater in hostel room will be fined Rs 10,000 along with cancellation to of hostel residency for rest of his/her studentship in the university.

30.8 Securities

All kind of securities mentioned above remaining unclaimed for two years from the date of becoming due for refund shall lapse to the university for transfer to the Welfare Fund.

30.9 Refund of Securities

i. The mess security will be refunded when a student leaves the university or the hostel, after deduction of outstanding dues of the university, subject to the submission of clearance, completed in all respects.

ii. The refundable university security, library security and hostel security, however, shall stand forfeited if a student withdraws from or leaves the university before completing the first year.

30.10 Semester Registration / Fee

a. Regular semester fee & charges are payable before the start of every semester (Fall or Spring). The Treasurer will notify the fee schedule for all sessions one month before the start of every new semester in accordance with the Academic Schedule notified by the Director Academics. The last date of semester registration will be the last date of regular semester fee & charges submission.

b. The registration of the students (forms or online) for each semester will be done by the Chairmen of the academic departments.

The notified regular semester fee and charges for each semester shall be managed by the Treasurer. The registration and fee submission shall be completed ten (10) days prior to the start of the semester.

c. In case of a regular semester, if a student fails to register himself and/ or to deposit the regular semester fee & charges (Defaulter Students' List to be notified by the Treasurer) for some cogent reasons, a fine of Rs. 100/- per day will be charged till one month of the commencement of classes. During this period chairman of the department can permit such candidate for late registration with payment of fine till that date.

d. If a student fails to get himself registered for a regular semester and/or does not deposit the regular semester fee & charges (Defaulter Students' List to be notified by the Treasurer) till one month after start of semester, he will be treated as suspended from the department. The Chairman will notify his suspension to all concerned. The Chairman can lift this suspension after the payment of re-admission fee and a fine of Rs. 4,000/-.

e. After one month of start of a regular semester, chairmen of all academic departments will notify the complete lists of registered students to all the concerned. These lists also include the students who have frozen their semester or who have registered themselves for additional courses with junior sessions and the names of students whose admissions have been suspended.

f. The student who fails to register for a regular semester and/or to deposit regular semester fee & other charges (Defaulter Students' List to be notified by the Treasurer) till the mid-semester examinations, his admission shall stand cancelled which will be notified by the Chairman. Such students will not be allowed to sit in the classes and to attempt the end semester examination of the semester.

g. The student whose admission has been cancelled can apply for re-admission. In this case application will be routed through Departmental Semester Committee (DSC) of the department and will be placed before the Dean for the final decision. The Dean will notify this decision to all the concerned. Re-admission fee, fine of Rs. 8,000/- and any other penalty imposed by the Dean will be applicable.

h. For all the above-mentioned cases, the student will not claim any other relaxation in the rules governing for teaching, attendance, and examinations etc.

i. The student who fails to register himself and/or to deposit the regular semester fee & charges before the end semester examination of the semester, he will be treated as dismissed from his regular session. If he is willing for re-admission, he shall apply for forced relegation with the junior session explained in relevant clause of UG

Rules & Regulations.

30.11 Fee Refund Policy for Admission Withdrawal case:

The following fee refund policy will be applicable in case of admission withdrawal (Revised National Level Fee-Refund Policy for Higher Education Institutions of Pakistan notified by HEC vide No. 10-1/HEC/A&C/2015/6542 dated December 7, 2015 and UET, Taxila adopted vide notification No. UETT/A&R/S-5/(51)/1969 dated November 28, 2019):

%age of Fee	Timeline For Semester
Full (100%) Fee Refund	Up to 7th day of commencement of classes
Half (50%) Fee Refund	From 8th – 15th day of commencement of classes
No (0%) Fee Refund	From 16th day of commencement of classes

i. Percentage of Fee shall be applicable on all components of fee, except for security and admission charges.

ii. Timeline shall be calculated continuously covering both weekdays and weekend.

31 University Dress Code

The students shall wear dress that ensures modesty, sobriety, and dignity. The dress must neither be offensive to social norms and ethical values of the society nor injurious to feminine. The students shall wear dress that ensures modesty, sobriety, and dignity. The dress must neither be offensive to social norms and ethical values of the society nor injurious to feminine.

32 Miscellaneous

32.1 Liability for Injury Damage and Loss:

The University teaching programs include training in its workshops and laboratories, places of engineering interest, industrial concern, and construction jobs. The University or other concerns shall not be responsible in the event of an injury, damage or loss to a student resulting from any cause whatsoever during such training.

32.2 Modification of Rules and Regulations:

The rules and regulations governing various aspects of students' life at the University (such as discipline, admissions, examination, migrations, fees, and charges etc.) are given in this prospectus or elsewhere as they stood at the time of its publication. There is no guarantee that these rules and regulations will remain unchanged throughout a student's stay at the University; nor does it, in any way

restrict or curtail the inherent powers for the University authorities to modify them whenever in their judgment any modifications are called for, and to implement the modified rules and regulations from a date which they deem appropriate.

33 Admission Schedule

Online Admission Forms	19th April,2023 (Wednesday)
Hifz-e-Quran Test (Jamia Masjid Bilal UET, Taxila) at 9:30	06th May,2023 (Saturday)
1st Merit List on the website	08th May, 2023 (Monday)
Last Date Depositing Dues and Original Documents for 1st Merit List	For updated admission schedule please visit http://admissions.uettaxila.edu.pk
2nd Merit List on the website	
Last Date of Depositing Dues and Original Documents for 2nd Merit List	
3rd Merit List on the website	
Last Date Depositing Dues and Original Documents for 3rd Merit List	
Issuance of Registration No. to admitted students	
Start of 1st Semester Classes	
Admission Closure	

NOTES:

i. The selected candidates in a merit list must join the University within specified time limit as per requirements laid down under clause 29. If they fail to do so, their names would be excluded from future merit lists and their admission would be cancelled.

ii. No call letters shall be posted to selected candidates.

iii. The detailed lists can be viewed at the official website of the university at: **admissions.uettaxila.edu.pk**

iv. The display of merit lists shall continue till the admission is closed. So, keep visiting the University Web site for further merit lists (if any).

34 Admission Committee

Prof. Dr. Muhammad Iram Baig Convener	051-9047412
Engr. Muhammad Kashif Iqbal Deputy Convener	051-9047687
Mr. Khalid Mahmood Registrar	051-9047406
Mr. Muhammad Nawaz Treasurer	051-9047413
Dr. Malik Intisar Ali Sajjad Associate Professor, EED	051-9047558
Admission Office Staff	
Mr. Abdul Waheed Assistant	051-9047412
Mr. Usman Khalid Qureshi Jr. Programmer	
Mr. Ghulam Dastgir Jr. Clerk	
Hafiz Muhammad Shahid Naib Qasid	

35 STUDENTS CODE OF CONDUCT

- You shall be honest, faithful, and just, and shall not act in any manner derogatory to the honor, integrity, and dignity of the engineering profession.
- You shall not injure, maliciously, directly, or indirectly, the reputation or employment of another engineer, nor shall you fail to act equitably while performing professional duty.
- You shall use your knowledge and skill of engineering for human welfare, and render professional service and advance, which reflects your best professional service and advance, which reflects your best professional judgment.
- You shall not abuse your position or power, nor accept illegal gratification of any sort.
- You shall faithfully observe and fulfill all your obligations.
- You shall express your opinion on engineering or other matters in a frank, open and straight forward manner.
- You shall not criticize another engineer's work without his knowledge nor malign or injure his profession- al reputation.
- You shall not ridicule fellow engineers nor let one discipline of engineering derides other disciplines or professions.
- You shall not directly or indirectly discredit other engineers nor assign (derogatory) epithets to their per- sons or work.
- Your professional advice shall be based on full knowledge of the facts and honest conviction, and you shall not write articles or advertise in self-laudatory or in any manner derogatory to the dignity of the profession.
- You shall ascertain facts before accepting them and shall not encourage or cause others to carry tales. Credulity is no credit.
- You shall help one another in upholding and doing that is right and shall not associate with those who transgress and those who indulge in unethical practices.
- You shall be kind and considerate to others and shall not fail to be cooperative and accommodating.
- You shall decide matters of common professional interest by mutual consultation.

36 IMPORTANT NOTICE: ADMISSION POLICY

ADMISSION SCHEDULE

For updated admission schedule please keep visiting
admissions.uettaxila.edu.pk

ELIGIBILITY FOR ADMISSION

The candidate should have obtained at least 60% unadjusted marks in examination based on which he seeks admission. Marks of NCC and Hifz-e-Quran, where applicable, shall be added only for determination of merit and not towards eligibility. Rounding off percentage figure to make it 60% will not be considered towards eligibility. The candidate having 50% marks will be considered for Computer Science only.

PREFERENCE TABLE

Only one F-I is required for all disciplines of interest in UET, Taxila. The applicant should precisely and carefully fill the preferences table. The order of preferences once given shall be final and cannot be changed subsequently after the submission of Application Form online.

FORFEITURE OF RIGHT FOR ADMISSION

A selectee who fails to fulfill the requirements laid down in 29.1 and 29.2 within the prescribed time limit shall forfeit his right of admission and will not be considered in subsequent merit lists.

TRANSFER ON THE BASIS OF GIVEN PREFERENCES AND MERIT

In case a seat in any Discipline/Category of higher preference given by a candidate falls vacant and he is eligible for transfer to that Discipline/Category based on his merit, he shall automatically be transferred to that Discipline/Category. He will have no right to retain his admission in the previous Discipline/Category because the seat vacated by him shall simultaneously be allotted to the next eligible candidate on merit.

FREEZING IN ANY GIVEN DISCIPLINE AND CATEGORY

If an applicant requests in writing to retain the discipline and category in which he has been selected for admission on merit, then he will not have any right to claim his admission in any other discipline and category of higher or lower merit if a seat falls vacant in any discipline. Applicant desiring to freeze category/discipline must have to apply in person in the admission office on the prescribed form for this purpose before the next merit list is displayed.

UNIVERSITY OF ENGINEERING AND TECHNOLOGY
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