University of Engineering & Technology, Taxila

UNDERGRADUATE PROSPECTUS - 2015

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.

Vice Chancellor's Message

Human civilization, as we understand, has gone through different epochs. Consequently economies of different epochs have got different forms: from hunting and gathering to agrarian economy, to industrial economy, and finally to the knowledge society and economy of our day. In knowledge based economy, the capacity to create wealth and make progress depends mainly upon the type and amount of knowledge and the number of knowledgeable people a country or society has. We are currently witnessing the emergence of knowledge economy in Pakistan. The role of higher education and higher education institutions is thus pivotal for promotion and sustenance of knowledge economy. We, at UET Taxila, not only realize our role, but are also committed to serve the society and economy by creating and imparting cutting edge knowledge in the field of engineering & technology. I strongly believe that Higher Education is a public good. It means that nobody should be excluded from its access and increasing access to higher education will not diminish its benefits to others. With this vision of Higher Education, we have adopted a student centric approach and have set clear goals.

First, we want to increase access to Higher Education. Pakistan has only 8.6% access rate to higher education. In order to increase the access to Higher Education, we have been trying for last one decade not only to increase the enrollment in our existing departments, but have also started new programs and opened a sub-campus in Chakwal. Our second sub-campus will be soon established in Pind Daden Khan. Currently, we have more than 5000 students body, which was only 1000 in year 2000. Our new campuses are creating equal opportunity for the students of less developed areas and will thus reduce the class stratification in society.

Second, it is pertinent to mention here that for increasing enrolment, we never ever compromise merit. We recruit Best & Brightest students and ensure to provide them a quality learning environment. We have heavily invested to establish new and state of the art labs, new class rooms, new building, fast and reliable internet access throughout the campus, new cafeterias and hostels, and a huge collection of books in the library. We have a fleet of 23 buses to provide transportation facility to the students living in the twin cities of Rawalpindi and Islamabad and of surrounding areas.

UET Taxila is not a for-profit organization. We meet approximately only 20 % of our annual expenses through tuition fees. For the rest of our expenses, both provincial and federal governments are generously supporting us. Over and above, we offer generous merit and need based financial assistance. Last year 18% of our students received some form of financial assistance.

I consider engineering as combination of science, art, and craft. Science part is covered in class rooms by a competent faculty; 25 % of our faculty has PhD degrees. To develop the art of engineering, we frequently invite industry experts to deliver lectures to our students. These practitioners are called as industry professors and industry aces. We are also making linkages with industry and trying to fully capitalize the industrial hubs of Taxila and Hattar. To learn the craft part of engineering, we encourage and facilitate our students to get internship in industry. We have established dedicated Placement and Alumni Offices for helping students in finding jobs and internships. Our faculty is involved in joint projects with industry and making contribution in solving problems of local industry. In sum, we can claim that the education we are imparting is relevant to the needs of our industry, country, and society. We have recently added new courses of social sciences to make the soul and character of our students, to make them socially and politically responsible and active citizens. In sum, we are imparting education in diverse disciplines of engineering and technology, which has high quality, affordable, relevant for student, industry and society.

Prof. Dr. Niaz Ahmad Akhtar (SI)

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 some where near 50 AD. During the next 200 years Taxila became a renowned centre of learning, philosophy, art and religion, Jaulian being a centre 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 Education Minister 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 Shah Wali Shah on Taxila-Havelian branch line. The city of Taxila is 35 km from the twincities 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.
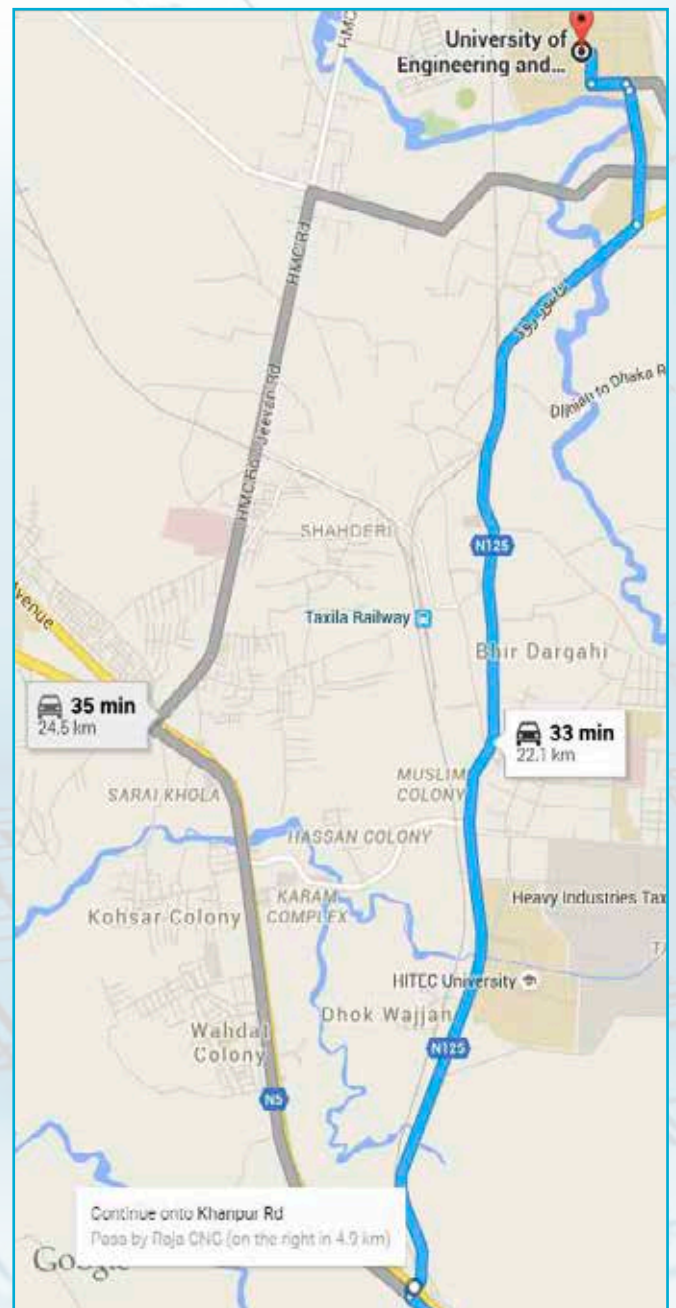
Pakistan
The land of antiquity and diversity

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

Islamabad
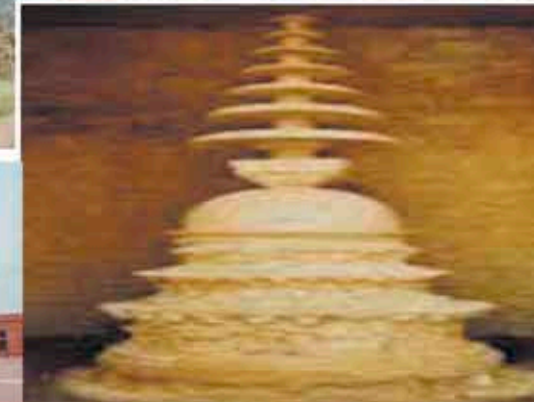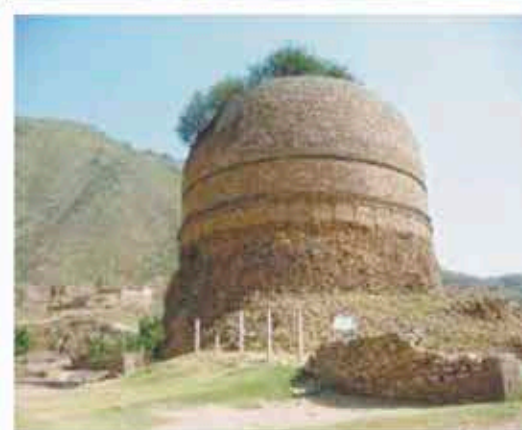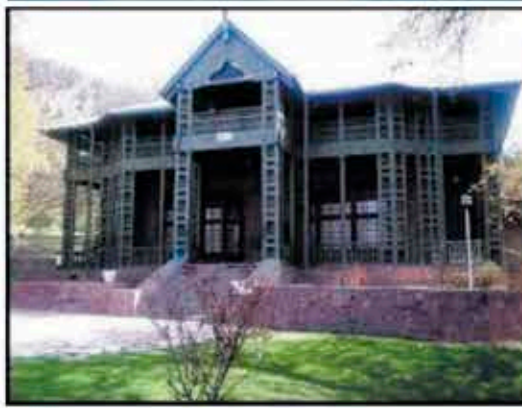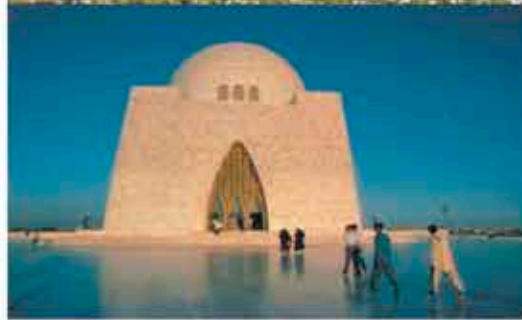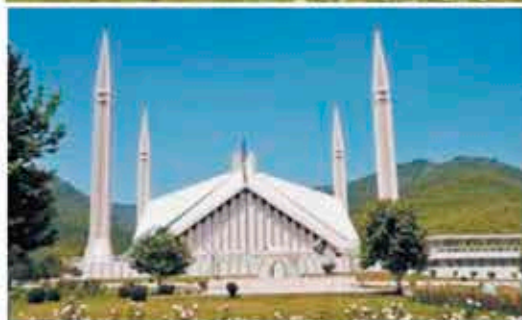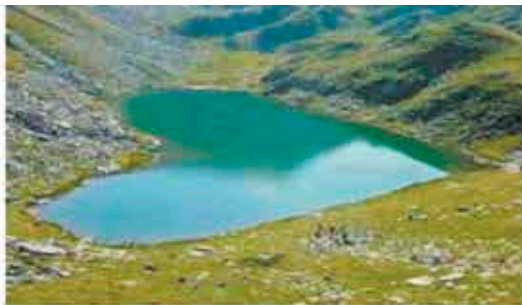
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ORGANIZATIONAL SETUP

Chancellor
Malik Muhammad Rafique Rajwana
(Governor of the Punjab)

Pro-Chancellor
Rana Mashood Ali
Minister for Education, Punjab

Vice Chancellor
Prof. Dr. Niaz Ahmad Akhtar (SI)

Registrar
Engr. Mansoor A. Baluch

Controller of Examinations
Mr. Mahmood Akhtar

Treasurer
Mr. Israr ul Haq (PAAS)

Directror ASR & TD
Prof. Dr. Abdul Razzaq Ghumman

Director Undergraduate Studies
Prof. Dr. Mumtaz Ahmad Kamal

Director Student Affairs
Prof. Dr. Tahir Nadeem Malik

Director Information Technology Centre / Networks
Prof. Dr. Adeel Akram

Project Director (B&W)
Dr. Fiaz Ahmed Tahir

Director Telephone Exchange
Prof. Dr. Gulistan Raja

Director Digital Library
Dr. Nadeem Majeed Choudhary

Director Admin & Security
Lt. Col (R) Syed Muhammad Ali

Director Academics /Quality Assurance
Engr. Mubashir Nawaz Warraich, TI,

Director Procuremment
Mr. Muhammad Gul Aziz Awan

Deans of Faculties

Faculty of Civil and Environmental Engineering	Prof. Dr. Abdul Razzaq Ghumman
Faculty of Electronic and Electrical Engineering	Prof. Dr. Mohammad Ahmad Choudhry
Faculty of Mechanical and Aeronautical Engineering	Prof. Dr. Shahab Khushnood
Faculty of Telecommunication and Information Engineering	Prof. Dr. Adeel Akram
Faculty of Industrial Engineering	Prof. Dr. Mukhtar Hussain Sahir
Faculty of Basic Sciences and Humanities	Prof. Dr. Mukhtar Hussain Sahir

Chairmen of Academic Departments

Department of Civil Engineering	Prof. Dr. Mumtaz Ahmad Kamal
Department of Computer Engineering	Prof. Dr. Muhammad Iram Baig
Department of Electrical Engineering	Prof. Dr. Ahmad Khalil Khan
Department of Mechanical Engineering	Prof. Dr. Riffat Asim Pasha
Department of Software Engineering	Dr. Tabassam Nawaz
Department of Telecommunication Engineering	Dr. Yasar Amin
Department of Electronic Engineering	Prof. Dr. Gulistan Raja
Department of Industrial Engineering	Prof. Dr. Mirza Jahanzeb
Department of Environmental Engineering	Prof. Dr. Liaqat Ali Qureshi
Department of Computer Science	Dr. Adnan Habib
Department of Basic Sciences	Mr. Mahmood Akhtar

Sub Campus Chakwal

Director Chakwal Campus	Prof. Dr. Aftab Ahmad
Chairman Department of Electronic Engineering	Prof. Dr. Aftab Ahmad
Chairman Department of Mechatronics Engineering	Dr. Amir Sultan

SERVICES AND COMMON FACILITIES

Chairmen of Committees

Admission Committee	Prof. Dr. Khawaja Sajid Bashir
Health	Prof. Dr. Qaiser-uz-Zaman Khan
Library	Prof. Dr. Abdul Razzaq Ghumman
Transport	Prof. Dr. Mohammad Ahmad Choudhry
Sports	Dr. Obaidullah
Masajid	Prof. Dr. Muhammad Iram Baig
Time Table	Prof. Sagheer Ahmad
Discipline	Prof. Dr. Mumtaz Ahmad Kamal
Affiliation Committee	Prof. Dr. Aftab Ahmad
House Allotment Committee	Prof. Dr. Mukhtar Hussain Sahir

Deputy Registrars

Establishment/Affiliation	Mr. Khalid Mehmood
Academic & Regulation	Syed Ali Hussain Naqvi
Dues & Schelorship	Mr. Muhammad Ilyas Khan
Accounts/Transport	Mr. Muhammad Nawaz

Deputy Directors

Placement/Alumni	Mr. Ijaz Ahmed
Planning & Development	Ms. Sadia Shahbaz
Quality Enhancment Cell	Mr. Iftikhar Ahmad

Audit

Resident Auditor	Mr. Sher Ali

Assistant Registrars

Accounts	Mr. Shahid Saleem
Audit	Mr. Abid Mehmood Qureshi
Establishment	Mr. Ehsan Ahmed
Procurement	Mr. Usama Khalid

Health Clinic

Chief Medical Officer	Dr. Shaheen Sughra
Medical Officer	Dr. Muhammad Arif Nadeem
Medical Officer	Dr. Sabahat Qudus
Medical Officer	Dr. Sadia Tanveer

Library

Librarian	Mr. Muhammad Anwar (Gold Medallist)
Dy. Librarian (Morning)	Mr. Muhammad Irfan Aslam
Asstt. Librarian (Morning)	Mr. Muhammad Mushtaq Khan
Asst. Librarian (Evening)	Mr. Malik Muhammd Safdar

Sports

Director Physical Education (Male)	Mr . Muhammad Akmal Hussain
Assistant Director Physical Education (Female)	Ms. Shamsa Ghafoor

Public Information Office

Public Information Officer	Engr. Mansoor A. Baluch

Vice-Chancellor's Office

Secretary to Vice Chancellor	Syed Basharat Abbas Shah

Legal Cell

Legal Advisor	Mr. Farhat Abbas Ch.

Estate Office

Residant Officer/ Estate Officer	Engr. Tahir Ali

Examinations Branch

Assistant Controller	Rana Nadeem Anjum
Assistant Controller	Engr. Zakaullah

Hostels

Senior Warden
Prof . Dr. Mohammad Ahmad Choudhary

Foreign Faculty Hostel
Dr. Haris Aziz

Halls of Residence

Warden (Male)

1. Prof. Dr. Mirza Jahanzaib
2. Dr. Imran Hafeez

Resident Tutors – Iqbal (I) Hall

1. Dr. Nadeem Majeed Choudhary
2. Engr. Muhammad Bilal Asif

Resident Tutors – Quaid-e-Azam (Q) Hall

1. Engr. M. Asjad Saleem
2. Engr. Zahid Rasheed
3. Engr. Mansoor Ashraf

Resident Tutors – Abu Bakar (AB) Hall

1. Mr. Syed Sabyel Haider
2. Engr. Zaheer Ahmed
3. Syed Zulqarnain Haider

Resident Tutor – Omar & Usman Hall

Engr. Mubashir Ayub

Resident Tutors – Ali Hall

1. Engr. Mubashir Ayub
2. Engr. Shamas Tabraiz

Resident Tutor - Ayesha Hall
Engr. Zunaira Huma

Trunk Numbers: 9047 (RWP/IBD PRI port #) 400,500,600 (Operator Extensions), 9314216-23 (Taxila, 8 Lines),
Fax No: 051-9047420
The Intercom extensions are configured as Rawalpindi/Islamabad local numbers. 051-9047ddd (300 lines), where ddd stands for the 3-digit intercom extensions listed below:

	Intercom Ext. (ddd)
Vice-Chancellor	401
Secretary to the Vice-Chancellor	403, 404
Deans of Faculties	
Electrical & Electronics Engineering	533
Mechanical & Aeronautical Engineering	666
Civil & Environmental Engineering	633
Telecom. & Information Engineering	566
Industrial Engineering	825
Chairmen of Academic Departments	
Electrical Engineering	535
Electronic Engineering	720
Computer Engineering	568
Software Engineering	735
Civil Engineering	635
Environmental Engineering	795
Mechanical Engineering	668
Computer Science	573
Industrial Engineering	827
Telecommunication Engineering	765
Basic Sciences	428
Other Establishments	
Registrar	405
Deputy Registrar (Establishment)	407
Establishment Branch	409
Deputy Registrar Academic & Regulation	410
Academic & Regulation Branch	411
Admissions Office (Under Graduate)	412
Treasurer	413
Accounts Branch	417

Deputy Registrar (Dues & Scholarship)	421
Student Section	422
Resident Auditor	423
Controller of Examinations	428
Examination Branch	432, 433
Project Director (Building & Works)	434
Executive Engineer	436
Director Academics/QEC	492
Deputy Director QEC	493
Director Admin & Security	476
Director Physical Education	473
Director P&D	442
Deputy Director Placement	444
Legal Advisor	445
University Library	455
University Health Clinic	460
Network Centre	468
Transport Office	470
Directorate Students Affairs	472
Post Office	474
Habib Bank Ltd.	475
Senior Warden	533
Quaid-e-Azam Hall	267,277
Iqbal Hall	270,279
Ali Hall	271,280
Abubakar Hall	269,278
Umer Hall	272,281
Usman Hall	272,282
Ayesha Hall	283,274
Chakwal Campus	0543-602003, 0543-602004

CODE OF ETHICS

For the seekers and practitioners of the magnificent science of engineering

IN THE NAME OF ALLAH, THE BENEFICENT, THE MERCIFUL

» 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, malici-ously, 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 professional 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 persons 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.

ACADEMIC PROGRAMS

The University offers B.Sc. Degree courses in Civil Engineering, Computer Engineering, Electrical Engineering, Mechanical Engineering, Software Engineering, Telecommunication Engineering, Environmental Engineering, Electronic Engineering, Industrial Engineering and Computer Science at Main Campus, Taxila.

Sub Campus Chakwal offers B.Sc. degree courses in Mechatronics and Electronic Engineering.

Exisiting Faculties & Departments

Faculty of Civil and Environmental Engineering
Department of Civil Engineering
Department of Environmental Engineering

Faculty of Electronics and Electrical Engineering
Department of Electrical Engineering
Department of Electronic Engineering

Faculty of Mechanical and Aeronautical Engineering
Department of Mechanical Engineering

Faculty of Industrial Engineering
Department of Industrial Engineering

Faculty of Telecommunication and Information Engineering
Department of Computer Engineering
Department of Software Engineering
Department of Telecommunication Engineering
Department of Computer Science

Faculty of Basic Sciences and Humanities
Department of Basic Sciences

Future Programs

The Following new departments will be established under the respective faculties in near future:

Faculty of Mechanical and Aeronautical Engineering
Department of Aeronautical Engineering
Department of Metallurgy & Material Engineering

Faculty of Industrial Engineering
Departmen t of Engineering Economic & Management

Faculty of Civil and Environmental Engineering
Department of City & Regional Planning

UNIVERSITY OF ENGINEERING AND TECHNOLOGY- TAXILA / UNDERGRAD PROSPECTUS 2015

PROFILE OF THE UNIVERSITY FACULTIES

FACULTY OF CIVIL AND ENVIRONMENTAL ENGINEERING 1

Dean
Prof. Dr. Abdul Razzaq Ghumman

DEPARTMENT OF CIVIL ENGINEERING

Chairman
Prof. Dr. Mumtaz Ahmed Kamal

Professors

Dr. Abdul Razzaq Ghumman
BSc Engg (Lahore), MPhil (CEWRE Lahore)
PhD (Univ. of London, UK)

Dr. Mumtaz Ahmad Kamal
BSc Engg (Lahore), PhD (Queen's Univ. UK)

Dr. Hashim Nisar Hashmi
BSc Engg (Hons) (Gold Medalist) (Lahore)
PhD (Queen's Univ. UK)

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

Dr. Liaqat Ali Qureshi
BSc Engg (Lahore)
MSc Engg (Taxila), PhD (Taxila)

Dr. Muhammad Yaqub
BSc Engg (Taxila)
MSc Engg (Taxila),
PhD (University of Manchester, UK)

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

Associate Professors

Engr. Ashfaq Ahmad Tahir
BSc Engg (Lahore)
MSc Engg (Taxila)

Dr. Imran Hafeez
BSc Engg (Lahore)
MSc Engg (Taxila)
PhD (Taxila)
Post Doc (USA)

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

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

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

Assistant Professors

Engr. Muhammad Salman
BSc Engg (Taxila)
MSc Engg (NUST)

Dr. Jawad Hussain
BSc Engg (Taxila)
MSc Engg (Taxila)
PhD (The Univ. of Auckland, NZ)

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

Dr. Muhammad Fiaz Tahir
BSc Engg (Taxila), MSc Engg (Lahore)
PhD (Taxila)

Dr. Naveed Ahmad
BSc Engg (Taxila), MSc Engg (Taxila)
PhD (Univ. of Nottingham, UK)

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

Engr. Shahzad Saleem
BSc Engg (Hons, Taxila)
MSc Engg (Taxila) (On higher studies abroad)

Engr. Syed Bilal Ahmed Zaidi
BSc Engg (Hons, Taxila), M.Sc. Engg (Taxila)
(On higher studies abroad)

Engr. Muhammad Usman Arshid
 BSc Engg (Taxila), MSc Engg (Taxila)

Engr. Mehwish Asad
BSc Engg (Taxila), MSc Engg (Taxila)

Engr. Afaq Ahmad
BSc Engg (Hons, Taxila) , MSc Engg (Taxila)
(On higher studies abroad)

Lecturers

Engr. Qadeer Hussain
BSc Engg (Taxila)
MSc Engg (Taxila) (On higher studies abroad)

Engr. Muhammad Irshad Qureshi
BSc Engg (Taxila), MSc Engg (Taxila)
(On higher studies abroad)

Engr. Naveed Ahmad,
BSc Engg (Hons, Taxila)
MSc Engg (Taxila) (On higher studies abroad)

Engr. Ghufran Ahmad Pasha,
BSc Engg (Hons, Taxila), MSc Engg (Taxila)
(On higher studies abroad)

Engr. Muhammad Saad
BSc Engg (Taxila) , MSc Engg (Taxila)

Engr. Saqib Mehboob,
BSc Engg (Taxila) , MSc Engg (Taxila)

Engr. Imran Khan
BSc Engg (Taxila) , MSc Engg (Taxila)

Engr. Muhammad Irslan Yaqub
BSc Engg (Taxila) , MSc Engg (Taxila)

Engr. Muhammad Rameez Sohail
BSc Engg (MP, Risalpur), MSc Engg (NUST)
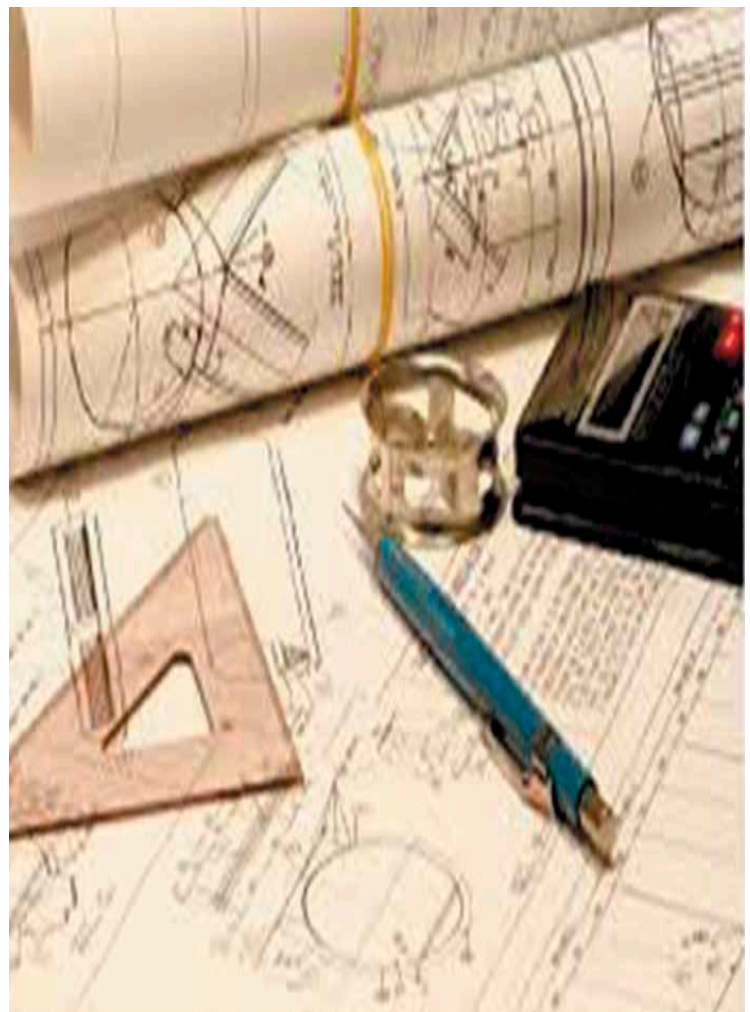
The Department

Department of Civil Engineering is actively engaged in disseminating civil engineering education for the last thirty seven 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 staff strength of 37, nearly 70% of whom contribute to postgraduate teaching and are involved in PhD research work. Approximately 710 undergraduate and 175 postgraduate students are registered in the department. Civil engineers cater to the national needs for buildings, highways, dams, bridges, irrigation network and water supply systems, and are the world's largest users of building materials.

Courses of Study

The Department of Civil Engineering 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 the MSc and PhD degrees in Civil Engineering.

In the bachelor's course, emphasis is laid on the fundamental concepts and principles, which constitute 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 is 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 ten laboratories to meet the academic requirements of students and teachers as well as the professional needs of the government and private organizations:

a.   Geo- Tech Engineering
b.   Concrete Technology
c.   Strength of Materials
d.   Transportation Engineering
e.   Hydraulics/Fluid Mechanics
f.   Theory of Structures/ Structural Engineering
g.   Surveying
h.   Public Health Engineering
i.   CAD laboratory
j.   Postgraduate Research Laboratory

Department upgrades all the laboratories from time to time through the funds provided by Higher Education Commission (HEC) and its own resources. Recently, Department received grants from HEC and Transportation & Structural Engineering Laboratories were upgraded with the state of the art equipment, whereas Hydraulics/ Fluid Mechanics Laboratory has been shifted in its new building and new equipment was procured and installed which is functioning. Department has also established Postgraduate Research Laboratory which has latest 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 will prove 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

In order to satisfy the increasing demand for relevant advanced technological education, the department offers full time and part time MSc degree courses in Structural Engineering, Water Resources & Irrigation Engineering and Transportation 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 a number of research projects funded by HEC through the Directorate of Advanced Studies, Research and Technological Development. Research papers based upon 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. Twenty One students have been awarded PhD degrees in various fields. Presently about 33 PhD scholars are pursuing their PhD research work. Research is being carried out in the following areas:

a. Structural Engineering
b. Soil Mechanics and Foundation Engineering
c. Transportation Engineering
d. Water Resources and Irrigation Engineering
e. Hydraulic Engineering
f. Concrete Technology
g. Environmental Engineering

Numerical modeling and computer-application in all the research activities are being given special attention. The courses of studies have been designed on the basis of 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

1st Semester

Course	Course Title	Credit Hours	
		Part I	Part II
CE-101	Civil Engineering Drawing	1	2
CE-102	Engineering Mechanics	2	1
CE-103	Engineering Geology	2	1
CE-104	Surveying-I	2	4
MA-105	Mathematics-I	3	0
	Total:	**10**	**8**
	Semester Total for Part-I & II	**18**	

2nd Semester

Course	Course Title	Credit Hours	
		Part I	Part II
CE-106	Surveying-II	2	4
CE-107	Civil Engineering Materials	2	1
CE-108	Communication Skills & Technical Report Writing	1	1
CE-111	Professional English	0	2
MA-109	Mathematics-II	3	0
HU-110	Pakistan Studies	2	0
	Total:	**10**	**8**
	Semester Total for Part-I & II	**18**	
	Total for 1st Year	**36**	

3rd Semester

Course	Course Title	Credit Hours	
		Part I	Part II
CE-201	Fluid Mechanics-I	2	1
CE-202	Properties of Concrete	2	1
CE-203	Civil Engineering Practice	2	1
MA-204	Mathematics and Computer Programming	2	2
HU-205	Islamic Studies	2	0
	Total:	**10**	**05**
	Semester Total for Part-I & II	**15**	

4th Semester

Course	Course Title	Credit Hours	
		Part I	Part II
CE-206	Theory of Structures-I	3	1
CE-207	Strength of Materials-I	2	1
CE-208	Soil Mechanics-I	2	1
CE-209	Drawing, Estimation & Construction	1	3
HU-210	Computer Applications	2	2
	Total:	**10**	**8**
	Semester Total for Part-I & II	**18**	
	Total for 2nd Year	**33**	

5th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CE-301	Theory of Structures-II	3	1
CE-302	Strength of Materials-II	3	1
CE-303	Soil Mechanics-II	2	2
CE-304	Construction Planning & Management	2	1
CE-305	Hydrology and Water Resources	2	1
	Total:	**12**	**6**
	Semester Total for Part-I & II	**18**	

6th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CE-306	Environmental Engineering-I	2	1
CE-307	Reinforced Concrete-I	3	1
CE-308	Design of Steel Structures	2	1
CE-309	Fluid Mechanics-II	2	1
CE-310	Transportation Engineering-I	2	2
	Total:	**11**	**6**
	Semester Total for Part-I & II	**17**	
	Total for 3rd Year	**35**	

7th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CE-401	Environmental Engineering-II	2	1
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	2
	Total:	**11**	**7**
	Semester Total for Part-I & II	**18**	

8th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CE-407	Structural Engineering	2	1
CE-408	Irrigation Engineering	2	1
CE-409	Design of Structures	1	3
CE-410	Computer Aided Analysis & Design	1	2
CE-406(B)	Project	0	2
	Total:	**06**	**09**
	Semester Total for Part-I & II	**15**	
	Total for Final Year	**33**	
	Grand Total for Four Years	**137**	

DEPARTMENT OF ENVIRONMENTAL ENGINEERING

Chairman
Prof. Dr. Liaqat Ali Qureshi

Professor
Prof. Dr. Liaqat Ali Qureshi
BSc Engg (UET, Lahore)
MSc Engg (UET, Taxila),   PhD (UET, Taxila)

Assistant Professors
Engr. Sidra Iftikhar
BSc Environmental Engg (UET, Lahore)
MSc Environmental Engg (UET, Lahore)

Dr. Sadia Nasreen
MSc Environmental Chemistry (FJWU,Rwp)
MS Environmental Sciences (COMSATS,Abbotabad)
PhD Environmental Engg (China)

Engr. Muhammad Bilal Asif
BSc Environmental Engg (UET, Lahore)
MSc Environmental Engg (NUST, Islamabad)

Engr. Shamas Tabraiz
BSc Environmental Engg (UET, Lahore)
MSc Environmental Engg (UET, Lahore)

Lecturers
Engr. Rasikh Habib
BSc Environmental Engg (NUST, Islamabad)
MSc Environmental Engg (NUST, Islamabad)

Engr. Sadia Fida
BSc Environmental Engg (UET, Lahore)

Engr. Babar Abbass
BSc Environmental Engg (NUST, Islamabad)

Engr. Khurrrum Hamidi
BSc Civil Engg. (UET, Taxila)
MSc Civil Engg. (UET, Taxila)

Lab Engineer
Engr. Muhammad Zeeshan
BSc Environmental Engg (UET, Lahore)

Shared Faculty
Dr. Mumtaz Ahmad Kamal (Professor, CED)

Dr. Shahab Kushnood (Professor, MED)

Dr. Naeem Ejaz (Associate Professor, CED)

Dr. Usman Ali Naeem (Associate Professor, CED)

Dr. Muhammad Sultan (Assistant Professor, BSD)

Dr. Muhammad Mudassar (Assistant. Professor, BSD)

Engr. Saqib Mehmood (Lecturer, CED)

Mr. Mamood Akhtar (BSD)

Mr. Jawad Ahmad (Lecturer, BSD)

Mr. M. Wakeel Ahmad (Lecturer, Comp, Sci. Dept.)

Visiting Faculty
Ms. Saima
MA ,English

The Department

The Department of Environmental Engineering was started in 2010 with an enrollment of 45 undergraduate students per year. The department is working under the Faculty of Civil & Environmental Engineering. The department is equipped with laboratories including Environmental Analytical Lab, Environmental Microbiology Lab, Water & Waste Water Lab, Air & Noise Pollution Lab, Environmental Chemistry Lab and Advance Analytical Lab which cater for the experimental and project works. The department employs highly qualified faculty with diverse backgrounds and research interests.

Courses of Study

The Department of Environmental Engineering offers fulltime course of four years duration, leading to the bachelor 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:

- Environmental Engineering Lab. Techniques
- Environmental Engineering Processes
- Water Supply and Sewerage Network Design
- Water & Waste water Treatment and Design
- Cleaner Production Techniques
- Membrane Based Treatment Technologies

- Solid & Industrial Waste Management
- Air & Noise Pollution Control
- Environmental Impact Assessment and Management

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

Future Plans

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

Courses Under Semester System
BSc Environmental Engineering

1st Semester		Credit Hours	
Course	**Course Title**	**Part I**	**Part II**
EN-111	Introduction to Environmental Engineering	3	0
EN-112	Environmental Chemistry	2	1
BH-113	Engineering Calculus	3	0
CE-114	Civil Engineering Drawing	1	2
CS-115	Introduction to Computer Programming	1	2
BH-116	Islamic Studies	2	0
	Total:	**12**	**5**
	Semester Total for Part-I & II	**17**	

2nd Semester		Credit Hours	
Course	**Course Title**	**Part I**	**Part II**
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 for Part-I & II	**18**	
	Total for 1st Year	**35**	

3rd Semester		Credit Hours	
Course	**Course Title**	**Part I**	**Part II**
EN-211	Environmental Microbiology	2	1
CE-212	Strength of Materials	2	1
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:	**13**	**03**
	Semester Total for Part-I & II	**16**	

4th Semester		Credit Hours	
Course No.	**Course Title**	**Part I**	**Part II**
EN-221	Environmental Engineering Lab. Techniques	1	2
EN-222	Environmental Engineering Processes	3	0
CE-223	Transportation Engineering	2	1
BH-224	Probability and Statistics	3	0
CE-225	Fluid Mechanics	2	1
CE-226	Introduction to GIS and RS	2	1
	Total:	**13**	**05**
	Semester Total for Part-I & II	**18**	
	Total for 2nd Year	**34**	

5th Semester			
Course No.	Course Title	Credit Hours	
		Part I	Part II
EN-311	Water Supply and Sewerage Network Design	2	2
MA-312	Thermodynamics	2	1
CE-313	Structural Analysis	2	1
CE-314	Hydrology and Water Resource Management	3	0
EN-315	Cleaner Production Techniques	3	0
CE-316	Project Planning and Management	2	0
	Total:	14	04
	Semester Total for Part-I & II	18	

6th Semester			
Course No.	Course Title	Credit Hours	
		Part I	Part II
EN-321	Water Treatment and Design	3	1
BH-322	Engineering Economics	2	0
EN-323	Environmental Impact Assessment and Management	3	0
EN-324	Solid Waste Management	3	0
EN-325	Air & Noise Pollution Control	3	1
BH-326	Technical Report Writing	2	0
	Total:	16	2
	Semester Total for Part-I & II	18	
	Total for 3rd Year	36	

7th Semester			
Course No.	Course Title	Credit Hours	
		Part I	Part II
EN-411	Environmental Modeling	3	0
EN-412	Wastewater Treatment and Design	3	1
EN-413	Occupational Health and Safety	3	0
EN-414	Contaminated Site Remediation	3	0
MS-415	Professional Ethics	2	0
EN-416	Final Year Project-I	0	3
	Total:	14	04
	Semester Total for Part-I & II	18	

8th Semester			
Course No.	Course Title	Credit Hours	
		Part I	Part II
EN-421	Industrial Waste Management	3	0
MS-422	Entrepreneurship	2	0
EN-423	Renewable Energy Resources	3	0
EN-424	Membrane based treatment technologies	2	0
EN-425	Final Year Project-II	0	3
	Total	10	03
	Grand Total Part I & II	13	
	Grand Total for Final Year	31	
	Grand Total for Four Years	136	

FACULTY OF ELETRONICS AND ELECTRICAL ENGINEERING 2

Dean
Prof. Dr. Mohammad Ahmad Choudhry

DEPARTMENT OF ELECTRICAL ENGINEERING

Chairman
Prof. Dr. Ahmad Khalil Khan
BSc Engg (Lahore)
MSc Engg(USA), PhD (Taxila)
MIEP, MIEEP, MIEEE (USA)

Professors
Dr. Muhammad Zafrullah
BSc Engg (Hons) (Gold Medalist) (Lahore)
MSc Engg (Lahore), PhD (Taxila)
MIEP, MIEEEP, MIEEE(USA) (on LPR)

Dr. Tahir Nadeem Malik
BSc Engg (Lahore)
MSc Engg (Lahore) , PhD (Taxila)
MIEEE (USA)

Dr. Aftab Ahmad
BSc Engg (Lahore)
MSc Engg (Lahore), PhD (Taxila)

Dr. Tahir Mahmood
BSc Engg (Hons) (Lahore)
MSc Engg (Lahore) , PhD (Taxila)
MIEE (UK)

Assistant Professors
Engr. Ilyas Ahmad
BSc Engg (Peshawar) ,MSc Engg(Taxila)
(on Higher Studies Abroad)

Dr. Inamul Hasan Shaikh
BSc Engg. (Hons) (Lahore)
MSc Engg.(Taxila) ,PhD (UK)

Dr. Shabbir Majeed Chaudhry
BSc Engg (Taxila)
MSc Engg (Taxila)
PhD (Taxila)

Dr. Salman Amin
BSc Engg (Hons) (Taxila)
MSc Engg (Taxila)
PhD (Taxila)

Dr. M. Irfan Arshad
BSc Engg (Taxila)
MSc Engg (Taxila), PhD (Taxila)

Dr. Sarmad Sohaib
BSc Engg (GIKI)
PhD (UK)

Engr. Sh. Saaqib Haroon
BSc Engg (Lahore)
MSc Engg (Taxila) (on study leave)

Engr. Tahir Muhammad
BSc Engg (Canada)
MSc Engg (Taxila),(on Higher Studies Abroad)

Engr. Junaid Mir
BSc Engg (Taxila)
MSc Engg (Taxila) (on Higher Studies Abroad)

Engr. Ghulam Ali
BSc Engg (Taxila)
MSc Engg (NUST)

Engr. Faisal Nadeem
BSc Engg (Islamabad)
MSc Engg (Taxila)

Lecturers

Engr. Hammad Shaukat
BSc Engg (Taxila)
MSc Engg (Taxila)

Dr. Intisar Ali Sajjad
BSc Engg (Lahore)
MSc Engg (Taxila), PhD (Italy)

Dr. Syed Azhar Ali Zaidi
BSc Engg (Taxila)
MSc Engg (Taxila), PhD (Italy)

Engr. Syed M. Bilal
BSc Engg (Taxila)
MSc Engg (Taxila) (on Higher Studies Abroad)

Engr. Mamoona Khalid
BSc Engg (Hons) (Taxila)
MSc Engg (Taxila)

Engr. Munira Batool
BSc Engg (Multan)
MSc Engg (Taxila),(on Higher Studies Abroad)

Engr. Mehroz Iqbal
BSc Engg (Taxila)
MSc Engg (Taxila)

Engr. Mansoor Ashraf
BSc Engg (Taxila)
MSc Engg (Taxila)

Engr. Faisal Siddiq
BSc Engg (Taxila)
MSc Engg (Taxila)

Engr. Abubakar Waqas
BSc Engg (Taxila)
MSc Engg (Taxila)

Engr. Raja Abdullah
BSc Engg (Taxila) (on Higher Studies Abroad)

Engr. Moazzam Azeem
BSc Engg (Taxila) (on Higher Studies Abroad)

Engr. Saif Siddique Butt
BSc Engg (Taxila) (on Higher Studies Abroad)

Engr. Ayesha Ijaz
BSc Engg (Taxila) (on Higher Studies Abroad)

Lab Engineers

Engr. Zunaira Huma
BSc Engg (Taxila)

Engr. Farzana Kousar
BSc Engg (Taxila)

Engr. Habib ur Rehman Habib
BSc Engg (Taxila)
MSc Engg (Taxila)

Engr. Wasif Tabbassum
BSc Engg (IU Bahawalpur)

Engr. Nouman Qamar
BSc Engg (Taxila)
MSc Engg (Taxila)

Engr. Usama Ashfaq
BSc Engg (Taxila)

Engr. Muhammad Waseem
BSc Engg (Taxila)

Engr. Komal Munir
BSc Engg (Taxila)

Engr. Huma Iqbal
BSc Engg (Lahore)

Engr. Muhammad Aleem Zahid
BSc Engg (Islamabad)

Engr. Kashif Aslam
BSc Engg (Lahore)

Engr. Tanveer Khursheed
BSc Engg (Lahore)

The Department

Mission

To produce quality electrical engineers providing leadership and service for the socioeconomic development of humanity.

Vision

Aspiring for a Better World for Next Generation

Objectives

- To Strive for Excellence with Values.
- To address the challenges of market / industry
- To prepare the students for advanced learning & research in the field of Electrical Engineering.

Core Values

- Integrity
- Self Discipline
- Cognition
- Team Spirit

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 180 undergraduate students are enrolled annually. The department has produced more than 2350 graduate students so far.

The undergraduate program offers degree in "Bachelor of Science in Electrical Engineering" with following streams:

- Power
- Communication

An independent and spacious building with a covered area of 66,100 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 Thirteen well equipped laboratories::
a. Basic Electrical Engineering Lab
b. Computer Lab
c. Computer Simulation Lab
d. Digital Systems Lab
e. Electrical Machines Lab
f. Electronics Lab
g. Power Systems Lab
h. Microwave & Communication Lab
i. Multimedia & Vision Lab
j. Power Electronic Lab
k. Workshop & Projects Lab
l. Instrumentation and Measurements Lab
m. Optoelectronics Lab

These laboratories are 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 and provides students with a foundation in basic science, mathematics and the humanities. Written and oral communication skills are emphasized and developed. The computer as a tool for mathematical analysis, design, data analysis and instrumentation is extensively used.

Most of the courses have an integrated laboratory 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 courses in Electrical Engineering include 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 have to register for the 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 as satisfying the academic requirements for Registred Engineer (RE) status.

Postgraduate Studies & Research

The department started its postgraduate program in 1984 and doctoral study program in 2001. Until now 356 MSc and 33 PhDs have been produced. The postgraduate program offers a degree in "Master of Science in Electrical Engineering" with specializations in

- Electrical Power Systems
- Communication Systems
- Energy Systems
- Control Systems
- Electro Magnetics
- Power Electronics

The master degree courses are aimed at bringing the students abreast with the most recent developments in their fields of specialization. These courses are offered both for the part time as well as the full-time students. At present 40% students are enrolled in full-time and 60% students are enrolled in the part time program. Most of the part time students are working with major engineering organizations of the country.

The faculty members and postgraduate students have published 360 Research papers in different fields of Electrical Engineering.

The Department also 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 the teachers and postgraduate students.

Courses of Study for Undergraduate Program
BSc Electrical Engineering (Power/Communication)

1st Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-111	Linear Circuit Analysis	3	1
EE-112	Engineering Drawing	0	1
NS-113	Calculus and Analytic Geometry	3	0
CS-114	Introduction to Programming	3	1
NS-115	Applied Physis	3	0
HU-116	Communication Skills	3	0
	Total:	**15**	**3**
	Semester Total for Part-I & II	**18**	

2nd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-121	Digital Logic Design	3	1
EE-122	Electronic Devices & Circuits	3	1
EE-123	Workshop Practice	0	1
CS-124	Data Structures and Algorithms	3	1
NS-125	Linear Algebra	3	0
HU-126	Islamic Studies	2	0
	Total:	**14**	**4**
	Semester Total for Part-I & II	**18**	
	Total for First Year	**36**	

3rd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-211	Microprocessor Systems	3	1
EE-212	Electrical Machines	3	1
HU-213	Technical Writing	3	0
NS-214	Differential Equations	3	0
IDE-215	Engineering Mechanics	3	0
	Total:	**15**	**2**
	Semester Total for Part-I & II	**17**	

4th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-221	Eletrical Network Analysis	3	1
EE-222	Probability Methods in Engineering	3	0
NS-223	Multivariable Calculus	3	0
NS-224	Numerical Analysis	3	0
IDE-225	Thermodynamics	3	0
	Total:	**15**	**1**
	Semester Total for Part-I & II	**16**	
	Total for Second Year	**33**	

5th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-311	Signals and Systems	3	1
EE-312 / EE-313	Power Distribution and Utilization / Computer Communication Networks	3	1
EE-314	Electromagnetic Field Theory	3	0
EE-315 / EE-316	Instrumentation & Measurements / Electronic Circuit Design	3	1
HU-317	Pakistan Studies	2	0
	Total:	14	3
	Semester Total for Part-I & II	17	

6th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-321	Linear Control Systems	3	1
EE-322	Communication Systems	3	1
MS-323	Engineering Economics and Management	3	0
EE-324	Digital Signal Processing (Depth Elective-I)	3	1
EE-32##	Depth Elective-II	3	1
	Total:	15	4
	Semester Total for Part-I & II	19	
	Total for Third Year	36	

7th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
MS-411	Entrepreneurship	3	0
HU-412	Critical Thinking	3	0
EE-413	Senior Design Project-I	0	3
EE-41##	Depth Elective-III	3	1
	Total	9	4
	Semester Total for part- I & II	13	

8th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
HU-421	Organizational Behavior	3	0
EE-422	Senior Design Project-II	0	3
EE-42##	Depth Elective -IV	3	1
EE-42##	Depth Elective -V	3	1
	Total:	9	5
	Semester Total for Part-I & II	14	
	Total for Forth Year	27	
	Total Credit Hours	132	

List of Electives

Power (3)

A. Power Generation
B. Powr Transmission
C. Power System Protection
D. Power System Planning
E. Power System Analysis
F. Power system Economics and Management
G. Power System Operation and Control
H. Artificial Intelligence Tools
I. Fundamentals of High Voltage Engineering
J. Electrical Estaimation Installation and Planning
K. Distributed Generation
L. Alternate Energy Systems
M. Energy Storage Systems
N. Automotive Electrical Systems
O. Hybrid Energy Systems
P. Illumination Engineering
Q. Electrical Machine Modeling
R. Electrical Traction System

Communication (4)

A. Optical Fiber Communication
B. Satellite Communication
C. Information Theory & Coding
D. Wrieless Communication
E. Digital Commuication
F. Cellular Mobile Communication Systems
G. Multi Media Communication
H. RF Communication System Design
I. Microwave Communication System Design
J. Microwave Devices and Systems
K. Microwave Transmission Lines & Wave guides
L. Microwave Integrated Circuit Design
M. RF Circuit Design
N. Radar Systems
O. Broad Band Digital Networks
P. Radiating systems and Antennas
Q. RF Transceiver Design
R. Communication Electronics
S. Communication System Design & Performance Analysis
T. Introduction to Wavelets

Note:

I. Choice of Electives in 6th, 7th & 8th semester will be dependent on Elective chosen in 5th semester. No student can change the specialization area after choosing any of two areas above in his 5th Semester.

II. 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.

DEPARTMENT OF ELECTRONIC ENGINEERING

Chairman
Prof. Dr. Gulistan Raja

Professors
Dr. Mohammd Ahmad Choudhry
BSc Engg (Lahore)
MSc Engineering (GWU, USA),
PhD (Virginia Tech, USA)

Dr. Muhammad Javed Mirza
BSc Engg (PAF CAE, Karachi)
MSc Engineering (KFUMPM, KSA), PhD (OSU, USA)

Dr. Gulistan Raja
BSc Engg (Taxila)
MSc Engineering (Osaka Uni.Japan)
PhD (Taxila)

Assistant Professors
Dr. Nadeem Anjum
MCS (IIU, Islamabad)
MSc Engg (QMU, London), PhD (QMU, London)

Dr. Ahsan Ali
BSc Engg (Taxila)
MSc Engg (Taxila), PhD (TUH, Germany)

Dr. Yaseer Arafat Durrani
BSc Engg (EMU, Turkey)
MSc Engg (KTH, Sweden), PhD (UPM, Spain)

Dr. Muhammad Obaid Ullah
BSc Engg (Taxila)
MSc Engg (Taxila), PhD (UM, UK)

Lecturers
Engr. Adil Usman
BSc Engg (Air Univ, islamabad)
MSc Engg (Air Univ, Islamabad)

Engr. Mohsan Niaz
BSc Engg (Taxila)
MSc Engg (Sweden)

Engr. Syed Zohaib Hassan Naqvi
BSc Engg (IIUI)
MSc Engg (IIUI), MBA (VU)

Engr. Qummar Zaman
BSc Engg (IIUI)
MSc Engg (UET, Taxila)

Engr. Muhammad Faraz
BSc Engg (IIUI)
MSc Engg (UET, Taxila)

Lab Engineers
Muhammad Atif Imtiaz
BSc Engg Engg (MAJU)
MSc Engg (UET, Taxila)

Muhammad Umar Khan
BSc Engg (COMSATS)

The Department

The Department of Electronic Engineering started in 2010 with an enrollment of 60 undergraduate students per year. The department is housed in the historic building of laboratory block. Laboratory block is the first building of this campus constructed in 1977. The building is recently renovated to accomodate Electronic Engineering Department. The current enrolment of the department is 45 undergraduate sutdents per year.

The department is equipped with laboratories including Electronics Lab, Digital Systems Lab, Computer Lab, Control Lab, Automation Lab and ASIC & DSP Lab which cater for the experimental and project works. The department employs highly qualified faculty with diverse background and research interests.

The objective of the program is to produce skillful engineers to meet the technological challenges of the modern age. The degree program is aimed to meet the following education objectives:

• To *produce gradutes capable of developing innovatiove solutions, analysis, and design of electronic systems with their applications.*

• To *produce graduates exhibiting leadership with effective contribution towards the uplift of their profession and society through awareness abut professional ethics.*

• To *produce graduates who are willing to pursue continuous professional development for updating and expanding their knowledge base.*

Courses of Study

In all matters regarding courses of study and others, the department strictly follows the policies and guidelines of Higher Education Commission and Pakistan Engineering Council .
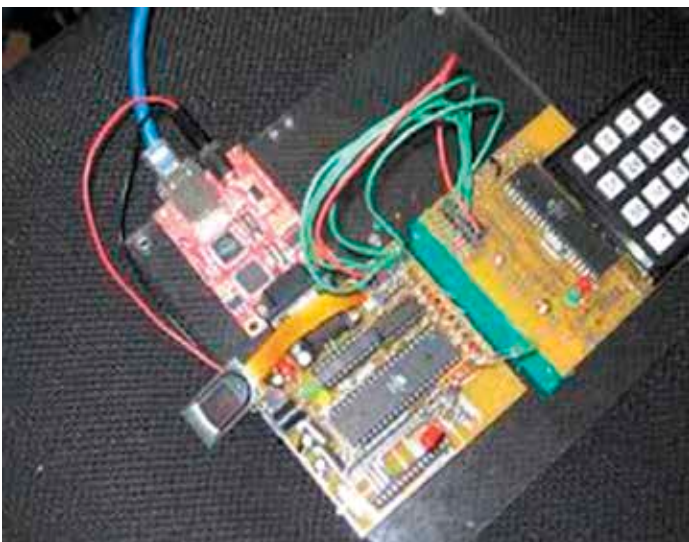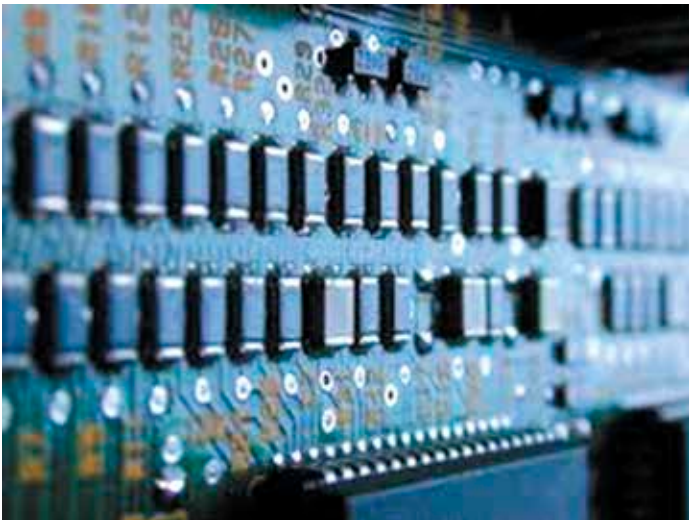
Courses of Study for Undergraduate Program
BSc Electronic Engineering

1st Semester

Code	Course Title	Credit Hours	
		part-I	**Part-II**
BH-111	Functional Engilish	3	0
BH-112	Calculus and Analytical Geometry	3	0
BH-113	Applied Physics	3	0
CS-114	Introduction to Computers	2	1
EN-115	Basic Electronic Engineering	3	1
	Total	**14**	**2**
	Semester Total for Part -I & II	**16**	

2nd Semester

Code	Course Title	Credit Hours	
		part-I	**Part-II**
BH-121	Communication Skills	3	0
BH-122	Pakistan Studies	2	0
BH-123	linear Algebra	3	0
BH-124	Chemistry	3	0
CS-125	Computer Programming	2	1
EN-126	Circuit Analysis-I	3	1
	Total	**16**	**2**
	Semester Total for Part -I & II	**18**	
	Total for 1st Year	**34**	

3rd Semester

Code	Course Title	Credit Hours	
		part-I	**Part-II**
BH-211	Differential Equations	3	0
EN-212	Computer - Aided Engineering Design	0	1
EN-213	Electronic Circuit Design	3	1
EN-214	Circuit Analysis-II	3	1
EN-215	Digital Logic Design	3	1
	Total:	**12**	**4**
	Semester Total for Part -I & II	**16**	

4th Semester

Code	Course Title	Credit Hours	
		part-I	**Part-II**
BH-221	Complex Variables and Transforms	3	0
EN-222	Proability and Random Variables	3	0
EN-223	Electric Machines	3	1
EN-224	Electromgnetic Field Theory	3	0
EN-225	Microprocessors & Microcontrollers	3	1
	Total:	**15**	**2**
	Semester Total for Part -I & II	**17**	
	Total for 2nd Year	**33**	

5th Semester		Credit Hours	
Code	**Course Title**	**Part-I**	**Part-II**
BH-311	Technical Report Writting & Presentation Skills	3	0
BH-312	Sociology	3	0
EN-313	Integrated Electronic	3	1
EN-314	Signal Processing	3	1
EN-315	Instrumentation and Measurements	3	1
	Total:	**15**	**3**
	Semester Total for Part-I & II	**18**	

6th Semester		Credit Hours	
Code	**Course Title**	**Part-I**	**Part-II**
BH-321	Islamic Studies	2	0
BH-322	Psychology	3	0
BH-323	Engineering Economics	3	0
EN-324	Analog & Digital Commincations	3	1
EN-325	Control Systems	3	1
	Total:	**14**	**2**
	Semester Total for Part-I & II	**16**	
	Total for 3rd Year	**34**	

7th Semester		Credit Hours	
Code	**Course Title**	**Part-I**	**Part-II**
MS-411	Engineering Management	3	0
EN/CS-4xx	Elective-I	3	1
EN/CS-4xx	Elective-II	3	0/1
EN/CS-4xx	Elective III	3	0/1
EN-499A	Electronic Engineering Project	0	3
	Total:	**12**	**4/6**
	Semester Total for Part-I & II	**16/18**	

8th Semester		Credit Hours	
Code	**Course Title**	**Part-I**	**Part-II**
MS-421	Professional and Social Ethics	3	0
EN/CS-4xx	Elective-IV	3	1
EN/CS-4xx	Elective-V	3	0/1
EN-499-B	Electronic Engineering Project	0	3
	Total	**9**	**4/5**
	Semester Total for Part-I & II	**13/14**	
	Total For Final Year	**29 ~ 32**	
	Grand Total for Four Year	**130 ~133**	

Abbreviations Used:
BH: Basics Sciences & Humanities
CS: Computer Sciences

EN: Electronic Engineering
MS: Management Sciences

List of Elective Courses

BH-426 Numerical Methods	(3+0)
EN-427 Power Electronics	(3+1)
EN-428 Industrial Electronics	(3+1)
EN-429 Linear Control System	(3+1)
EN-430 Digital Control System	(3+1)
EN-431 Industrial Control System	(3+1)
EN-432 Industrial Automation	(3+1)
EN-433 Introduction to Robotics	(3+1)
EN-434 Process Measurement Engineering	(3+1)
EN/CS-435 Introduction to Neural Networks	(3+0)
EN/CS-436 Artificial Intelligence	(3+1)
EN-437 Mechatronic Applications	(3+0)
EN/CS-438 Fuzzy Logic and Simulation	(3+0)
EN-439 Biomedical Instrumentation	(3+1)
EN-440 Biomedical Signal Analysis	(3+1)
EN-441 Medical Imaging	(3+1)
EN-442 Digital System Design	(3+1)
EN-443 Microelectronic Technology	(3+0)
EN-444 VLSI Design	(3+1)
EN-445 FPGA Based System Design	(3+1)
EN-446 Embedded System Design	(3+1)
EN-447 Computer Architecture	(3+1)
EN-448 Microcomputer Systems	(3+1)
EN-449 Hardware Software Codesign Techniques	(3+0)
EN-450 Digital Instrumentation Systems	(3+1)
EN-451 Laser and Fiber Optics	(3+0)
EN-452 Wireless Sensor Networks	(3+0)
EN-453 Filter Design	(3+1)
EN-454 Digital Signal Processing	(3+1)
EN/CS-455 Digital Image Processing	(3+1)
EN-456 Digital Speech Processing	(3+1)
EN/CS-457 Pattern Recognition and Matching	(3+0)
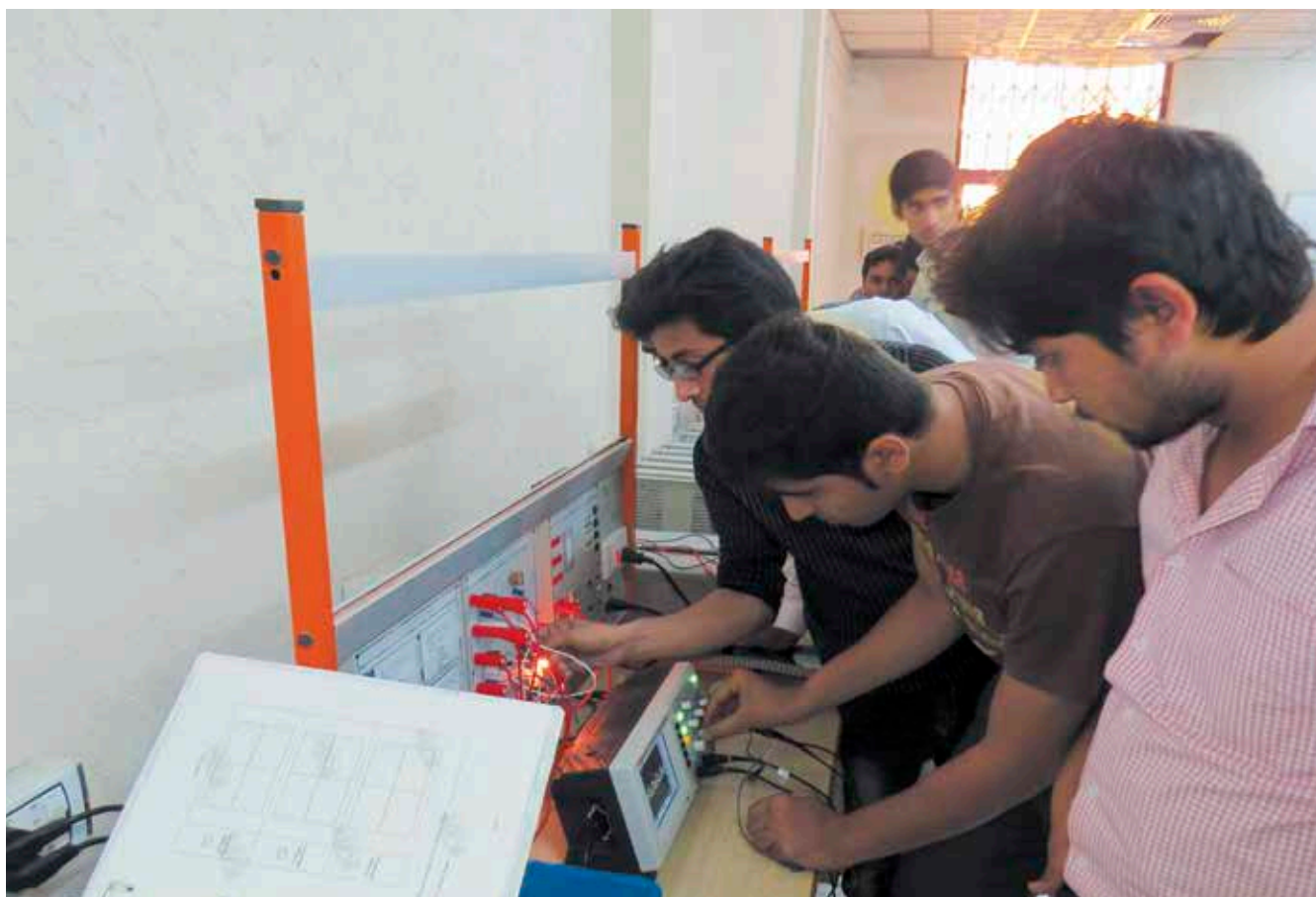
FACULTY OF MECHANICAL AND AERONAUTICAL ENGINEERING

3

Dean
Prof. Dr. Shahab Khushnood

DEPARTMENT OF MECHANICAL ENGINEERING

Chairman
Prof. Dr. Riffat Asim Pasha

Professors

Dr. Shahab Khushnood
BSc Engg (Hons) (Gold Medalist) (UET Lahore)
MSc Engg (UET Lahore), MBA (Marketing) (AIOU),
PhD (NUST)

Dr. M. Shahid Khalil
BSc Engg (UET Lahore), PhD (Sheffield, UK),
PGD(Quality), PGD(HRM)

Engr. Sagheer Ahmad
BSc Engg (UET Lahore)
MSc Engg (UET Lahore)

Dr. Khawaja Sajid Bashir
BSc Engg (UET Lahore)
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PhD (UET Taxila)
MBA (Marketing) (AIOU)

Dr. Riffat Asim Pasha
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Assistant Professors

Engr. Khalid Masood Khan
BSc Engg (UET Lahore)
MSc Engg (Birmingham, UK)

Engr. Zahid Suleman Butt
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MSc Engg (UET Taxila)

Engr. Muhammad Kashif Iqbal
BSc Engg (Hons) (UET Taxila)

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MSc Engg (UET Lahore)

Dr. Muzaffar Ali
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MSc Engg (UET Taxila) ,PhD (UET Taxila)

Engr. Muddasar Khan
BSc Engg (UET Taxila)
MSc Engg (NUST) (on higher studies abroad)

Engr. Abdul Mobeen
BSc Engg (UET Lahore)
MSc Engg (Germany)

Dr. Muhammad Shehryar
BSc Engg (NUST)
MSc Engg (France), PhD (France)

Dr. Masood ur Rahman
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MSc Engg (UET Taxila)

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Engr. Waqar Ahmad Qureshi
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Engr. Rana Atta-ur-Rahman
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Engr. Syed Muhammad Asif Raza
BSc Engg (UET Lahore)
MSc Engg (CUNY,USA)

Lecturers

Engr. Ahtesham-ul-Haq
BSc Engg (UET Taxila) (on higher studies abroad)

Engr. Sana Zulfiqar
BSc Engg (NED)

Engr. Aneela Anum
BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. M. Sajjad Sabir
BSc Engg (NUST)
MSc Engg (NUST)

Engr. Waqas Asghar
BSc Engg (UET Taxila)

Engr. Muhammad Usman
BSc Engg (UET Taxila)

Engr. Najam ul Hasan
BSc Engg (UET Lahore)

Lab Engineers

Engr. Muhammad Ahmed
BSc Engg (UET Taxila)

Engr. Muhammad Imran
BSc Engg (UET Taxila)

Engr. Zahid Waqas
BSc Engg (UET Lahore)

Engr. Muhammad Rafid
BSc Engg (UET Taxila)
MSc Engg Management (UET, Taxila)

The Department

Mechanical Engineering is a highly versatile and diversified engineering discipline. On one hand it is concerned with the design of machines and equipment that use energy and convert it into useful work. On the other hand it deals with the design and development of those machines that are used for manufacturing, production and process equipment.

The department offers four years degree program leading to BSc in Mechanical Engineering. At present, around 750 students in BSc, 170 students in MSc and 37 students in PhD are enrolled in the program.

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-Fluid Engineering
- Applied Mechanics and Design
- Manufacturing Processes Engineering
- Computer based Mechanical Engineering
- Applied Mathematics & Statistics
- Engineering Management

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 is 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 have the opportunity to 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 a large number of 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.

The department is offering Masters Degree program since 1983. A large number of 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 & 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 Masters program. The department is also offering PhD Program since 2001. By the end of year 2015 it is expected that the tally of completed PhDs from the MED would be 25 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:

a. Applied Thermodynamics
b. Mechanics of Materials
c. Refrigeration & Air Conditioning
d. Fluid Mechanics and Hydraulics
e. Heat and Mass Transfer
f. Mechanics of Machines
g. Power Plants
h. Internal combustion Engines
i. Engineering Materials
j. Modelling and Simulation
k. Engineering Mechanics (Static & Dynamics)
l. Drawing Hall
m. Stress Analysis
n. Mechanical Vibrations
o. Fracture Mechanics & Fatigue
p. Renewable Energy Research & Development Center (RERDC)
q. Composite Materials and Smart Structures

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 ft2. 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 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. Further more 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 equipments, particularly defense organizations.   The present equipment can perform the following well known standard tests at different levels:

• *Strain-controlled fatigue tests under axial loading*
• *Stress-controlled fatigue tests under axial loading*
• *Stroke-controlled fatigue tests under axial loading*
• *Fatigue tests under rotating bending moments*
• *Fatigue tests under combined bending & twisting moments*
• *Fatigue crack growth tests*
• *Fracture Mechanics tests (KIC, JIC, CTOD)*
• *Tensile tests on specimens of different geometries*
• *Static bending tests*
• *Static torsion tests*
• *Notch Impact tests*
• *Wear fatigue tests*

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 sum of 36.34 million rupees was spent under the project to procure new experimental equipment in the period stretching between 2006 and 2009. The Fluid Mechanics Lab today boosts twelve state of the art experimental equipments, 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 is 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 students can enhance their technical knowledge by using STL files directly from Pro-E and build a model in 3D using rapid prototyping System.

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

1st Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
GS-101	Calculus and Analyticla Geometry	3	0
HS-101	Functional English	2	0
CS-101	Computer System & Programing	2	1
GS-102	Applied Physics	2	1
ME-111	Engineering Drawing & Graphics	2	2
GS-103	Applied Chemistry	2	0
	Total:	**13**	**4**
	Semester Total for Part-I & II	**17**	

2nd Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
IS-101	Islamic Studies / Ethics	2	0
EE-101	Electrical Engineering	2	1
HS-102	Communication Skills	2	0
GS-104	Lienear Algebra and Ordrinary Differential Equations	3	0
ME-112	Workshop Practice	1	1
ME-113	Engineering Statics	2	1
ME-121	Thermodynamics-I	3	0
	Total:	**15**	**3**
	Semester Total for Part-I & II	**18**	
	Total for 1st Year	**35**	

3rd Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
IS-201	Pakistan Studies	2	0
ME-211	Engineering Dynamics	2	1
ME-212	Mechanics of Materials-I	3	1
ME-213	Engineering Materials	2	1
ME-221	Thermodynamics-II	2	1
ME-222	Fluid Mechanics-I	3	1
	Total:	**14**	**5**
	Semester Total for Part-I & II	**19**	
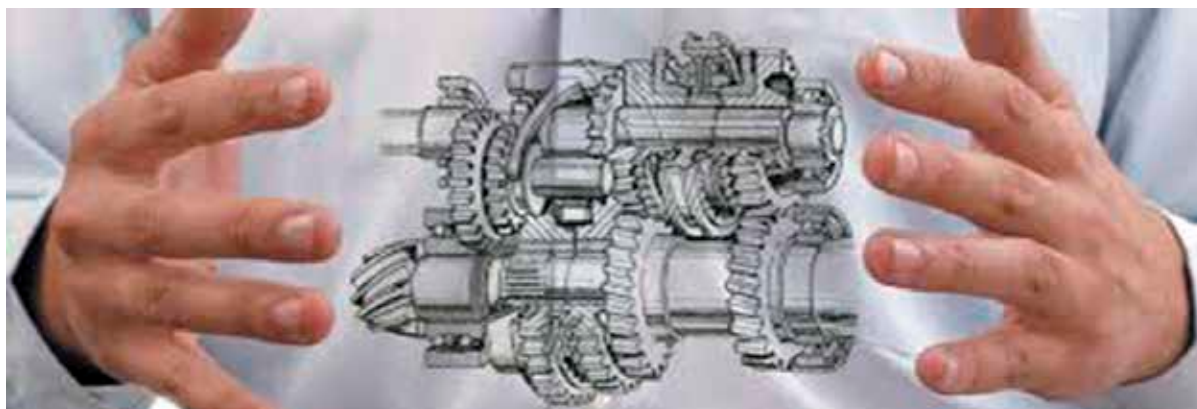
4th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
EE-201	Electronics Engineering	2	1
GS-201	Complex Varibles and Transforms	2	0
ME-214	Machine Design & CAD-I	2	1
ME-215	Machanics of Materials-II	3	1
ME-223	Fluid Mechanics-II	3	1
GS-202	Social Sciences	2	0
	Total:	**14**	**4**
	Semester Total for Part-I & II	**18**	
	Total for Second Year	**37**	

5th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
HS-301	Technical Report Writing and Presentation Skills	2	0
GS-301	Numerical Analysis	3	0
ME-311	Machine Design & CAD-II	3	1
ME-312	Precision Engineering & Metrology	2	1
ME-313	Manufacturing Processes	3	1
	Total	**13**	**3**
	Semester Total for Part-I & II	**16**	

6th Semester			
Course No.	**Course Title**	**Credit Hours**	
GS-302	Applied Statistics	2	0
ME-314	Control Engineering	2	1
ME-315	Mechanics of Machines	3	1
ME-321	Power Plants	2	1
ME-322	Heat and Mass Transfer	3	1
	Total:	**12**	**4**
	Semester Total for Part-I & I	**16**	
	Total for Third Year	**32**	

7th Semester		Credit Hours	
Course No.	Course Title	Part I	Part II
MS-401	Engineering Economics	2	0
ME-411	Mechanical Vibrations	3	1
ME-421	Internal Combustion Engines	2	1
ME-422	Refrigeration and Air Conditioning	3	1
ME-499	Design Project	0	3
	Total:	**10**	**6**
	Semester Total for Part-I & II	**16**	

8th Semester		Credit Hours	
Course No.	Course Title	Part I	Part II
ME-412	Advanced Manufaturing Systems	2	1
ME-413	Finite Element Methods	2	1
ME-4XY	Technical Elective Course	2	1
ME-4XY	Management Electives	2	0
ME-499	Design Project	0	3
	Total:	**8**	**6**
	Semester Total for Part-I & II	**14**	
	Total for Final Year	**30**	
	Grand Total for Four Years	**134**	

List of Elective Courses
Technical Electives: (ME-4XY)

a. ME-414   Maintenance Engineering
b. ME-415   Introduction to Mechatronics
c. ME-416   Tribology
d. ME-417   Mechanical Engineering Design Analysis
e. ME-423   Renewable Energy Technology
f. ME-424   Gas Dynamics
g. ME-425   Aerodynamics
h. ME-426   Computational Fluid Dynamics (CFD)
i. ME-427   Nuclear Engineering
j. ME-428   Stress Analysis

Management Electives: (ME-4XY)

a. MS-402   Operations Management
b. MS-403   Total Quality Management
c. MS-404   Project Management
d. MS-405   Operations Research
e. MS-406   Engineering Law
f. MS-407   Business and Entrepreneurship
g. MS-408   Safety Health and Environment
h. MS-409   Environment and Health

FACULTY OF INDUSTRIAL ENGINEERING

4

Dean
Prof. Dr. Mukhtar Hussain Sahir

DEPARTMENT OF INDUSTRIAL ENGINEERING

Chairman
Prof. Dr. Mirza Jahanzaib

Professors

Dr. Mukhtar Hussain Sahir
BSc Engg (Lahore)
MSc Engg (Lahore)
PhD (Taxila)

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

Assistant Professors

Dr. Wasim Ahmad
BSc Engg (Taxila)
MSc Engg (Taxila)
PhD Engg (UK)

Dr. Salman Hussain
BSc Engg (Taxila)
MSc Engg (UK)
PhD Engg (UK)

Dr. Haris Aziz
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MSc Engg (AIT Thailand)
PhD (AIT Thailand)

Engr. Syed Turab Haider
BSc Engg (Taxila)
MSc Engg (UK) (On Higher Studies Abroad)

Engr. Abdul Aleem
BSc Engg (Lahore)
MSc Engg (Taxila)

Lecturers

Engr. Saifullah
BSc Engg (Taxila)
MSc Engg (HUST, China)
(On Higher Studies Abroad)

Engr. Abid Ali
BSc Engg (PU , Lahore)
MScEngg (Taxila)

Engr. Zahid Rashid
BSc Engg (Lahore)

Engr. Zaheer Ahmad
BSc Engg (Lahore)

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

Lab Engineers

Engr. Muhammad Jawad
BSc Engg (Lahore)

Engr. Irshad Yehya
BSc Engg (PU, Lahore)
MSc Engg (Taxila)

Engr. Muhammad Usman
BSc Engg (PU, Lahore)

Introduction

Industrial Engineering is the branch of engineering that is concerned with the Design, Analysis, and Operation of Systems. These can range from a consumer product or single piece of equipment to large business, social, and environmental systems. Industrial Engineers determine the most effective ways to utilize the basic factors of ProductionPeople, Machines, Materials, Information, and Energyto make a product or provide a service. The Industrial Engineer's interest lies in modeling system functions and determining how best to achieve the objectives of the system. The methods employed in Industrial Engineering provide an excellent vehicle for considering both private and public costs and benefits.

Industrial Engineers by virtue of education and training have the opportunity to work in a variety of departments and businesses. The most distinctive aspect of industrial engineering is the flexibility that it offers. Whether it's 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 Engineers is growing. Industrial Engineers are the only engineering professionals trained as productivity and quality improvement specialists. Industrial Engineers figure out how to do things better. They engineer processes and systems that improve quality and productivity.

The Department

Industrial Engineering with Production and Manufacturing majors 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. Apart from BSc Engineering program, department is also offering MSc and PhD degree programs in the field of Industrial Engineering and Engineering Management. An independent four-year program leading to BSc degree in Industrial Engineering is being introduced with 2010-entry at the university.

Courses of Study

The Industrial 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;

- *Computational Industrial Engineering*
- *Human Resource's Skill development*
- *Managerial Capabilities Inculcation*
- *High-tech Manufacturing Technology and Management*
- *Quality, Productivity and Cost Effectiveness*

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

Soft technologies encompassing Statistical Analysis, Economics Optimization and Simulation Modeling courses prepare students to design and build large and complex systems for efficiency and effectiveness. Also, strong emphasis has been ensured to inculcate managerial capabilities in industrial engineering students by including a host of courses in management electives.

Rich industrial neighourhood 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 and a host of SME's in nearby Hattar Industrial Estate. The department has Seven Laboratories and a fully functional workshop. A large Machine Tools Laboratory and a state-of-the-art Advanced Manufacturing System (AMS) with CIM (Intellitek) equipment is available in the department. CAD/CAM lab consists of Denford machining suit, Boxford, Intellitek milling centers ZCorp Rapid Prototyping and automation modules. Metrology and QC lab equipped with the basic to intermediate level equipment taught to students. Human Factors and 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), and Expert Choice, Primavera, Pro Engineer, Minitab, CATIA and related software.

Courses Under Semester System
BSc Industrial Engineering

1st Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
HU-111	English I (Communication skills/Business Skills)	3	0
IE-101	Problem Solving for Industrial Engineers	2	0
IE- 102	Workshop Practice	1	1
ME-191	Engineering Drawing & Graphics	2	1
CS-192	Introduction to Computing	2	1
MA-191	Calculus	3	0
	Total:	**13**	**3**
	Semester Total for Part-I & II	**16**	

2nd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
HU-291	Logic & Critical Thinking	2	0
MA-192	Differential Equations	3	0
ME-292	Mechanical Technology	2	1
HU-112	Islamic Studies / Ethics	2	0
IE-121	Probability and Statistics	3	0
IE-122	Computer Aided Design & Modeling	2	1
	Total:	**14**	**2**
	Semester Total for Part-I & II	**16**	
	Total for 1st Year	**32**	

3rd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
IE-231	Engineering Management	2	1
HU-292	Technical Writing Skills	2	0
ME-221	Engineering Mechanics	2	1
HU-101	Applied Physics	3	0
ME-293	Materials Engineering	2	1
MA-193	Applied Linear Algebra	**3**	**0**
	Total:	**14**	**3**
	Semester Total for Part-I & II	**17**	

4th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
IE-241	Engineering Economics	3	0
IE-243	Operations Research	3	1
IE-242	Manufacturing Process	3	1
HU-113	Pakistan Studies	2	0
ME-294	Mechanics of Materials	2	1
EE-301	Industrial Electronics	**2**	**1**
	Total:	**15**	**4**
	Semester Total for Part-I & II	**19**	
	Total for 2nd Year	**36**	

5th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
IE-311	Operations of Manufacturing Systems	2	1
ME-311	Applied Machine Design & FEM	2	1
IE-312	Metrology & Statistical Quality Control	3	1
IE-313	Optimization Techniques	2	0
IE-314	Work Study & Methods Engineering	3	1
	Total:	**12**	**4**
	Semester Total for Part-I & II	**16**	

6th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
IE-321	Industrial Simulation	2	1
IE-322	Human Factors Engineering	2	1
IE-323	Management of Engineering Projects	3	0
MA-391	Numerical Analysis	3	0
IE-324	Planning & Scheduling in Manufacturing	2	0
IE-325	Industrial Automation and Robotics	2	1
	Total:	**14**	**3**
	Semester Total for Part-I & II	**17**	
	Total for 3rd Year	**33**	

7th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
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 for Part-I & II	**17**	

8th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
IE-XXX	Elective I	2	1
IE-XXX	Elective I	2	1
IE-XXX	Elective II	3	0
IE-XXX	Elective II	3	0
IE-492	**Project Phase II**	**10**	**5**
	Semester Total for Part-I & II	**15**	
	Total for Final Year	**32**	
	Total Credit Hours	**133**	

List of Elective Courses

(Elective I) Manufacturing Track

Course No.	Course Title	Credit Hours	
		Part I	Part II
IE-413	CAD/CAM	2	1
IE-414	Process Planning and Lean Systems	3	0
IE-415	Computer Integrated 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 and Reliability Analysis	3	0
IE-422	Special Topics	3	0
IE-423	Productivity Improvement Tools and Techniques	3	0
IE-424	Product Development and Concurrent Engineering	3	0
IE-425	Modeling & Analysis of Manufacturing Systems	3	0

(Elective II) Management Track

Course No.	Course Title	Credit Hours	
		Part I	Part II
IE-426	Marketing Management	3	0
IE-427	Human Resource Management	3	0
IE-428	Financial Management	2	1
IE-429	Quantitative and Qualitative Decision Making	3	0
IE-430	Knowledge Management	3	0
IE-431	Management Information System	2	1
IE-432	Organizational Behavior	3	0
IE-433	Soft Computing & Data Mining	2	1
IE-434	Production & Operation Management	3	0
IE-435	Special Topics	3	0
IE-436	Supply Chain & Logistics Management	3	0
IE-437	Expert System Applications	3	0
IE-438	Occupational Health & Safety	2	1

Dean

Prof. Dr. Adeel Akram

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. Muhammad Iram Baig

Professor

Dr. Muhammad Iram Baig
 BSc Engg (Lahore), MSc Engg (Lahore), PhD (Taxila)

Associate Professor
Dr. Hafiz Adnan Habib
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Assistant Professors
Dr. Muhammad Haroon Yousaf
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Engr. Malik Muhammad Asim
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Engr. Fawad Hussain
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Dr. Muhammad Majid
BSc Engg (Taxila) , MSc Engg (UK), PhD (UK)

Engr. Sana Ziafat
BSc Engg (Taxila), MSc Engg (Taxila)

Dr. Muhammad Awais Azam
BSc Engg (Taxila), MSc Engg (UK), PhD (UK)

Engr. Afshan Jamil
BSc Engg (Taxila) (Gold Medalist), MSc Engg (Taxila)

Engr. Naveed Khan Baloach
BSc Engg (Taxila), MSc Engg (Taxila)

Engr. Waqar Ahmed
BSc Engg (CIIT, Abd), MSc Engg (Taxila)
(On Higher Studies Abroad)

Engr. Abdul Rehman Chaudhry
BSc Engg (Taxila) , MSc Engg (LUMS)

Dr. Hussain Dawood
BSc Engg (CIIT, Wah) , ME (BNU, China), PhD (BNU, China)

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

Lecturers

Engr. Mona Zafar
BSc Engg (Taxila), MSc Engg (Taxila)

Engr. Romana Shahzadi
BSc Engg (Taxila) , MSc Engg (Taxila)

Engr. Noshina Ishaque
BSc Engg (Taxila), MSc Engg (Taxila)

Engr. Zahid Mehmood
BSc Engg (Hons) (CIIT ,Wah), MSc Engg (IIU, Islamabad)

Engr. Awais Tanveer Rana
BSc Engg (Taxila) (On Higher Studies Abroad)

Lab Engineers

Engr. Sanay Muhammad Umar Saeed
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Engr. Malik Amir Arsalan Awan
BSc Engg (Taxila), MSc Engg (NUST)

Engr. Aasim Raheel
BSc Engg (Taxila), MSc Engg (Taxila)

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

Message from Chairman

Computer Engineering has emerged tremendously in the last two decades and found position among the four most degrees awarded globally. Computer Engineers have tremendous job potential due to computing equipment utilization in almost every industry ranging from medical to aerospace. Students are advised to gain hands-on experience in their professional degree of Computer Engineering at UET Taxila. Department is equipped with state of the art laboratories to facilitate experimentation and gain hand-on experience. Technical societies are also formed to provide a suitable platform for additional learning.

The Department

Computer engineering degree program was started in 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 department worth Rs. 40 million with funding from HEC (Higher Education Commission) was started, which completed in year 2006. Building comprised of two floors out of which ground floor is for CPED. This floor has four class rooms, six labs, one examination halls, nearly twenty five offices and some other rooms. Department has laboratories with sufficient hardware and computing facilities. Each computing lab is equipped with at least twenty five PCs and each hardware lab is equipped with fifteen workstations. All computing labs are also networked and department has wireless networked coverage as well.

Computer Engineering department also arrange different sort of events in order to encourage students to take part in those events and groom their technical as well as non technical skills. The events that we have been arranging so far are; comupting and engineering competition in which fast wiring, e-gaming, speed programming and project compitition events aranged.

Program Objectives

- To produce Graduates who are able to practice computer engineering to serve state and regional industries, government agencies, or national and international industries.
- To produce Graduates with the necessary background and technical skills to work professionally in one or more of the following areas: computer hardware and software design, embedded systems, computer network design, system integration, electronic design automation.
- To produce Graduates for personal and professional success with awareness and commitment to their ethical and social responsibilities, both as individuals and in team environments.
- To produce Graduates who are capable of maintaining and improving their technical competence through lifelong learning, including entering and succeeding in an advanced degree program in a field such as engineering, science, or business.

Laboratories

1. Video & Image Processing Lab

Video and image processing lab was established in 2006 as a project funded by Higer Education Commission Pakistan . 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 for postgraduate & final year students.

2. Electronic System Lab

Electronic system lab contains specialized hardware in the area of electrical and electronics engineering. Lab offers services in the areas of electronic circuit, circuit analysis and digital logic design.

3. Computing Lab

Computing lab is equipped with latest forty Dell 760 Computing machines. Lab offers services for core computing areas e.g computer fundamentals, programing, data base management systems, algorithms and object oriented programming etc.

4. Digital Systems Lab

Digital systems lab contains specialized hardware in the domain of digital system design. Lab is equppied with micro controller kits (80C51 and PIC 18 series) micro processor kits and FPGA Kits. Lab offers in area of embedded system design, micro processor, computer architecure and digital system desgin.

5. Data Communication & Networking Lab

Data Communication and networking lab is

equppied with CISCO sponsored network relataied hardware alongwith computing machines. Lab is also providing vibrant services as CISCO local acadmy. Lab offers services in the areas of computer communication and networks.

6. Advance Computing Lab

Advance computing lab contains state of art dell 7010 computing machines. Lab offers services in core computing areas, operating systems and graphics design.

Technical Societies in the department:

Technical societies are established in the department that serves guideline for the students to choose their profession after their degree. Students entering in first semester are given orientation about these societies so that they can later on join these societies to have technical grooming.

The major objective of these technical societies is to develop strong interaction among the scholars and faculty in their corresponding field of interests. Computer Engineering students have been divided in to three categories for this reason. Scholars from undergraduate and postgraduate programs and members from the faculty share their work with each other.

Each society is headed by specialist of respective field from the faculty. Other faculty members also coordinate. One student is also selected as student chair for each society.

URL: http://web.uettaxila.edu.pk/uett/CPED/ techSociety.htm

Taxalian Robotics & Automation Club (TRAC)

This Society is a group of people who are committed to the advancement of robotics in the university through innovation and sharing of expertise, information and experience. Society arranges seminars, workshops and conferences on Micro-controllers, FPGAs and Processors. It hopes to serve as a catalyst for preparing students for the competencies required by industries today and in the near future. This society also aims to organize a national level competition in the university.

Society Counselor:
Engr. Naveed Khan Baloch

Society Coordinator:
Engr. Abdul Rehman Choudhry

Online Course Management System:

All the courses which are currently being taught in all the semesters are managed online. The purpose of this online management of courses is to provide access to the students to all the informative material regarding the subject anywhere all the time so that they can be updated. URL: http://web.uettaxila.edu.pk/uett/CPED/ cms.htm

Academic Cell in the Department:

An Academic Cell is also working in Computer Engineering Department. All student related activities: registration, attendance records, placement of students in different industries for internship, examination, student study trips etc. are managed by this cell. This cell also coordinates with onsite interview arrangements to facilitate different employers, Like AWC, PMO, PAEC and many others.

Industrial liaison and industry-academia collaboration at university level is also on the way.

Courses Under Semester System
BSc Computer Engineering

1st Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
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 for Part-I & II	**17**	

2nd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
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 for part I & part II	**17**	
	Total for First Year	**34**	

3rd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CP-201	Computer Organization & Architecture	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 & Transform Methods	3	0
	Total	**14**	**3**
	Semester Total for part I & part II	**17**	

4th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CP-206	Object Oriented Programming	2	1
CP-207	Operating Systems	3	1
CP-208	Microprocessor & Interfacing	3	1
CP-209	Signals & Systems	3	0
MA-210	Discrete Structures	3	0
	Total	**14**	**3**
	Semester Total for part I & part II	**17**	
	Total for Second Year	**34**	

5th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
CP-301	Digitlal Signal Processing	3	1
CP-302	Computer Commuincation and Networks	3	1
CP-303	Microcomputer Systems	3	1
MA-304	Numerical Methods & Probiablity	3	0
HU-305	Buiness Commuincation & Report Writing	2	0
	Total	**14**	**3**
	Semester Total for part I & part II	**17**	

6th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
CP-306	Digital System Design	3	1
SE-307	Data Base 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 for part I & part II	**17**	
	Total for Third Year	**34**	

7th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
CP-401	Preliminary Project Studies	0	2
MS-402	Project Management	3	0
CP-403	CEDE-II	3	1
CP-404	IDEE-II	3	1
HU-405	Engineering Economics	2	0
HU-406	Professional Ethics	2	0
	Total	**13**	**4**
	Semester Total for part I & part II	**17**	

8th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
CP-407	Design Project	0	4
MS-408	Management Information System	3	0
MS-409	Entrepreneurship & Leadership	2	0
CP-410	CEDE-III	3	1
CP-411	IDEE-III	3	1
	Total	**11**	**6**
	Semester Total for part I & part II	**17**	
	Total for Final Year	**34**	
	Total Credit Hours for Four Years	**136**	

Elective Courses for Computer Engineering

Computer Egineering Depth Elecives (CEDE)

Course Title	Credit Hours	
	Part I	Part II
Computer Graphics	3	1
Software Engineering	3	1
VLSI System Design	3	1
Control Engineering	3	1
Advance Topics in Computer Engineering	3	1
Systems Programming	3	1

Inter-Disciplinary Engineering Electives (IDEE)

Course Title	Credit Hours	
	Part I	Part II
Artificial Intelligence	3	0
Neural Networks and Fuzzy Logic	3	0
Parallel & Distributed Computing	3	0
Network Security	3	0
Wireless Communication	3	1
Digital Image Processing	3	1
Digital Communication	3	1
Communication Systems	3	1
Applied Electronics	3	1
Robotics	3	1
Advanced Algorithms	3	0

Software Engineering

DEPARTMENT OF SOFTWARE ENGINEERING

Chairman
Dr. Tabassam Nawaz

Associate Professor
Dr. Tabassam Nawaz
BSc Engg (Taxila)
MCS (BIIT), MSc Engg (Taxila), PhD (Taxila)

Assistant Professors
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MSc Engg (UK), PhD (UK)

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MS (CASE), MCS (Hamdard University Karachi)
PhD (Taxila)

Dr. Syed Muhammad Anwar
BSc Engg (Taxila) , MSc Engg (UK), PhD (UK)

Engr. Raja Muhammad Asjad Saleem
BSc Engg (Hons) (Taxila)
MSc Engg(Taxila)

Mrs. Huma Ayub Vine
MCS (QAU) , MS (NUST)

Engr. Ali Javed
BSc Engg (Hons) (Taxila) 3rd postion overall
MSc Engg (Taxila) Gold Medalist

Engr. M. Fahad Khan
BSc Engg (Hons) (Taxila)
MSc Engg (Taxila) Gold Medalist

Engr. Mubashir Ayub
BSc Engg (Hons) (Taxila)
MSc Engg (UK)

Engr. Saima Zareen
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MSc Engg (NUST)

Engr. Wajahat Abbas
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MSc Engg (Taxila) (On Higher Studies Abroad)

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Engr. Fawad Riasat Raja
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MSc Engg(Taxila) (On Higher Studies Abroad)

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MSc Engg (Taxila)

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MSc Engg (Taxila)

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MSc Engg (UK)

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MSc Engg (NUST)

Engr. Kanwal Yousaf
BSc Engg (Hons) (Taxila)
MSc Engg (Taxila)

Engr. Arta Iftikhar
BSc Engg (Hons) (Taxila)
MSc Engg (Taxila)

Engr. Asma Malik
BSc Engg (Hons) (Taxila)
MSc Engg (UK) (On Higher Studies abroad)

Lab Engineers
Engr. Nazia Bibi
BSc Engg (Hons) (Taxila)

Engr. Sidra Shafi
BSc Engg (Hons) (Taxila)

Engr. Rabia Arshad
BSc Engg (Hons) (Taxila)

The Department

Software Engineering degree Program was started in 2002. Initially, it was setup in Electrical Engineering Department and classes were conducted for evening session only. In the mean time, the construction of separate building for department worth Rs. 40 million with funding from HEC (Higher Education Commission) was completed in year 2006. Building comprises of seven class rooms, nine labs, one girl's common room, two examination halls and twenty offices. Department has laboratories with sufficient hardware and software facilities. Each lab is equipped with thirty PCs. The labs are networked and the department has wireless network coverage as well.

Software engineering department organizes different events to encourage student's participation and 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 Objectives

Software Program Objectives:

Graduates of Software Engineering Program shall be able to:

a. Apply proper theoretical, technical, and practical knowledge of software requirements, analysis, design, implementation, verification and validation, and documentation.

b. Develop appropriate solutions to a given problem using software engineering approaches that integrate ethical, social, legal, and economic concerns.

c. Design, synthesize, and analyze, software systems of increasing size and complexity at various abstraction levels i.e. from the individual component to the entire system architecture.

d. An ability to define, assess, and apply software quality practices for appropriate application on software development projects in a variety of domain areas.

e. Be an effective member of a multi-disciplinary software-intensive product development team.

f. Able to communicate, to varied stakeholder audiences, technical concepts in a complete, concise, and correct manner in a format appropriate for the audience.

g. Engage in lifelong learning of software engineering theories and technologies through graduate education, participation in professional activities, or the acquisition of new technical proficiencies, or managerial and leadership skills.
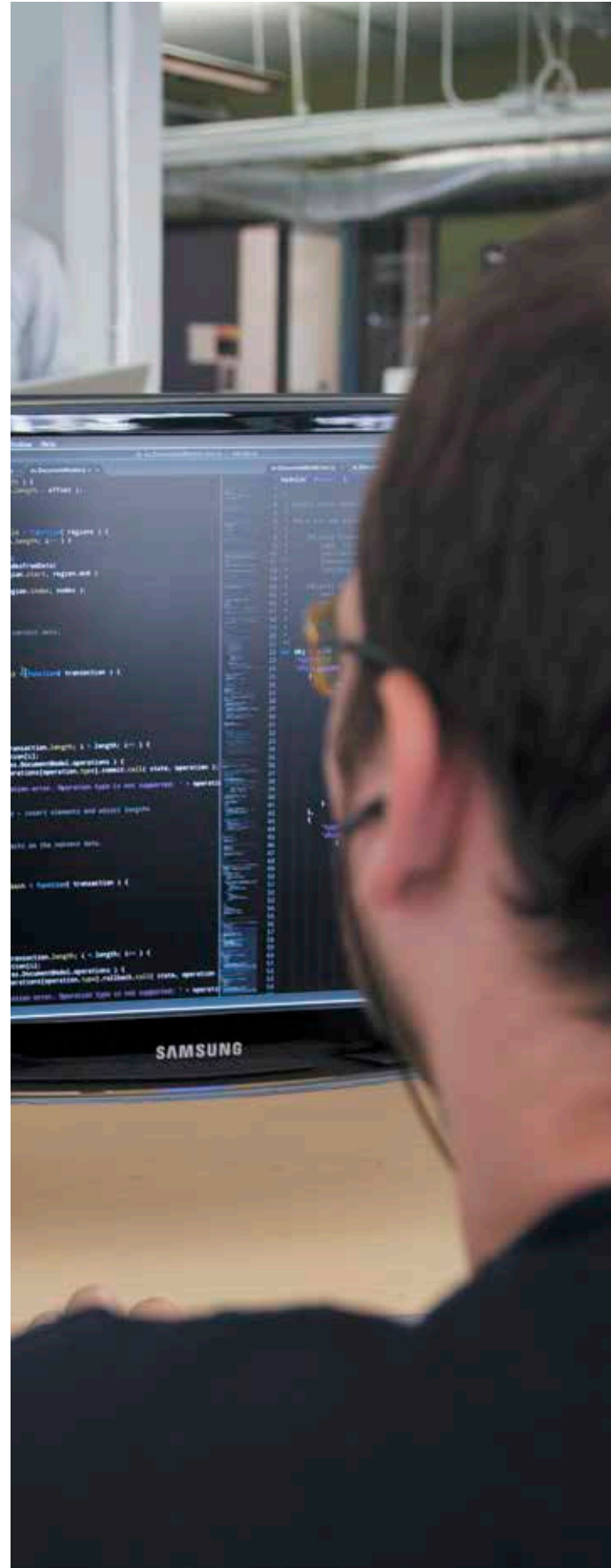
Laboratories

a.   Software Engineering Lab

The 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.

b.   Computer Graphics Lab

The purpose of this lab is to provide students a facility to conduct experiments related to Computer Graphics and visual programming courses.

c.   DOT IT Lab

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

d.   Elementary Computer Lab

This lab is dedicated for introductory courses including basic programming and computing. The lab is equipped with latest equipment and softwares to facilitate students.

e.   Final Year Project Lab

This lab is used by the students of final year to work on their final year project; the lab is equipped with all the necessary facilities that help the students.

Placement Bureau & Industrial Liaison Office at Software Engineering Department

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 in order 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.

a. Soft Desk

Domain of software development is touching new heights for the past few years and software technologies are rapidly being developed and become obsure within months. There is every need to keep an eye on changing trends in the field of Software Engineering. For the above stated purpose a society has been established in the Department of Software engineering named **SOFTDESK**. The major achievement of **SOFTDESK** is to organize UET Taxila Olympiad at National leve where universites from aal over Pakistan participates every year.
Society Advisor: Ali Javed

b. Society for Extra-Mural Activities

It has been the tradition of Software Department to arrange the Annual Student Day since 2007. Society provides the students a platform to exhibit their co-curricular and extracurricular talent. It organizes competations of different categories like drama, signing, gaming and technical quizzes extra.
Society Advisor: Engr. Fahad Khan

c. Mobile Application Development wing

This society arranges seminars, workshops, trainings in the area of Mobile Application Development (MAD).
Society Advisor: Engr. Ali Javed, Dr. Nadeem Majeed Chaudhry

d. Recreational Club

This society arranges trips to different parts of country.
Society Advisor: Engr. Mubashir Ayub

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Courses Under Semester System
BSc Software Engineering

1st Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
SE-101	Introduction to Computing	3	1
NS-102	Applied Physics	3	1
HU-103	Pakistan Studies	2	0
HU-104	Functional English	3	0
MA-105	Calculus and Analytical Geometry	3	0
	Total:	**14**	**2**
	Semester Total for Part-I & II	**16**	

2nd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
SE-106	Introduction to Software Engineering	3	0
EE-107	Digital Logical Design	3	1
SE-108	Programming Fundamentals	3	1
ME-109	Discrete Structures	3	0
HU-110	Communication Skills	3	0
	Total	**15**	**2**
	Semester Total for Part-I & II	**17**	
	Total for 1st Year	**33**	

3rd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
MA-201	Numerical and Symbolic Computing	2	1
SE-202	Software Requirements Engineering	2	1
SE-203	Data Structures & Algorithm	3	1
HU-204	Islamic Studies	2	0
MA-205	Liner Algebra and Differential Equations	3	0
	Total	**12**	**3**
	Semester Total for Part-I & II	**15**	

4th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
SE-206	Software Construction	2	1
SE-207	Operating Systems	3	1
SE-208	Software Design & Architecture	3	1
SE-209	Formal Methods in Software Engineering	3	0
SE-210	Object Oriented Programming	3	1
	Total	**14**	**4**
	Semester Total for Part-I & II	**18**	
	Total for 2nd Year	**33**	

5th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
SE-301	Software Quality Engineering	2	1
SE-302	Database Management System	3	1
SE-303	Internet Application Development	2	1
SE-304	Elective General*	3	0
HU-305	Technical Report Writting	3	0
	Total	**13**	**3**
	Semester Total for Part-I & II	**16**	

6th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
SE-306	Digital Image Processing	3	1
SE-307	Computer Communication & Networks	3	1
SE-308	Elective General*	3	1
SE-309	Artificial Intelligence	3	0
SE-310	Domain Specific Elective*	3	0
	Total	**15**	**3**
	Semester Total for Part-I & II	**18**	
	Total for 3rd Year	**34**	

7th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
SE-401	Software Testing	2	1
SE-402	Preliminary of Project Studies	0	2
SE-403	Elective General*	3	1
SE-404	Domain Specific Elective *	3	0
HU-405	Engineering Economics	3	0
MG-406	Marketing Management	3	0
	Total	**14**	**4**
	Semester Total for Part-I & II	**18**	

8th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
SE-407	Software Project Management	2	1
SE-408	Design Project	0	4
SE-409	Human Computer interaction	3	0
SE-410	Elective General *	3	0
MG-411	Entrepreneurship & Leadership	**3**	**0**
	Total	**11**	**5**
	Semester Total for Part-I & II	**16**	
	Total for Final Year	**34**	
	Grand Total for Four Years	**134**	

Elective Courses for Software Engineering

Domain Specific Elective Courses

Course No.	Course Title
	System for Small & Mobile Platforms
	Net-Centric Systems
	Information Systems and Data Processing
	Agent Based Systems
	Enterprise Security Architecture
	Enterprise System Engineering
	Fault Tolerant and Survivable Systems
	Financial and E-commerce Systems
	Multimedia, Game and Entertainment Systems
	Embedded and Real Time Systems
	Visual Programming

Elective General Courses

Course No.	Course Title
	Data Authentication and Security
	Digital Security & Encryetion
	Analysis of Algorithms
	Advance Operating Systems
	Data Warehousing & Data Mining
	Software Metrics
	Advanced Programming Techniques
	Web Technologies
	System Incident Handling
	RDBMS Using Oracle
	Distributed Computing
	Real Time Systems
	Computer Vision
	Wireless Networks

Elective General Courses

Course No.	Course Title
	Advance Software Technologies
	Theory of Intelligent Systems
	Mobile Computing
	Open Source Systems
	Computer Forensic
	Network Security
	Advanced JAVA with Emphasis on Internet Applications
	Multimedia Systems
	Enterprise System Engineering
	Network Programing
	Design Patterns
	Artificial Neural Networks
	Machine Learing
	Business Process Automation

DEPARTMENT OF
TELECOMMUNICATION ENGINEERING

Chairman
Dr. Yasar Amin

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Assistant Professors
Dr. Rashid Saleem
BSc Engg (GIKI)
MSc Engg (Taxila), PhD (Univ. of Manchester, UK)

Dr. Ing. Rameez Asif
BSc Engg (Taxila), MSc (Taxila) , MSc Engg NANO & Microelectronic(Italy), PhD (Germany)

Engr. Ghulam Shabbir
BSc (Taxila), MSc Engg (UMT LHR),
MS Telecom Management (INT France)

Engr. Muhammad Jamil Khan
BSc Engg (Taxila) , MSc Engg (Taxila)

Engr. Farzana Kulsoom
BSc Engg (Taxila). MSc Engg (Taxila)
(on higher studies abroad)

Engr. Farzana Arshad
BSc Engg (Taxila)
MSc Engg (Taxila)

Engr. Syeda Iffat Naqvi
BSc Engg (Taxila), MSc Engg (Taxila)

Engr. Humayun Shahid
BSc Engg (IST, IBA) , MSc Engg (NTU, Singapore)

Engr. Farhan Qamar
BSc Engg (Taxila) MSc (Taxila)

Engr. Mudassar Ali
BSc (Taxila) MSc (Taxila)

Engr. Ali Riaz
BSc Engg (IOWA State, USA)
MSc Engg (IOWA State, USA)

Lecturers
Engr. Faisal Ali
BSc Engg (COMSATS, IBD)
MSc Engg (UK)

Engr. M. Zeshan Sarwar
BSc Engg (Taxila)
MSc Engg (Iqra Uni IBA)

Engr. Lubna Nadeem
BSc Engg (Taxila)
MSc Engg (Taxila)

Engr. Mian Shahzad Iqbal
BSc Engg (COMSATS)
MSc Engg (Taxila) (on higher studies abroad)

Engr. Salman Azam
BSc Engg (on higher studies abroad)

Engr. Usman Masood
BSc Engg (on higher studies abroad)

Engr. Annum Mushtaq
MSc Engg (Taxila)

Engr. Rizwana Shahzadi
MSc Engg (Taxila)

Lab Engineers
Miss. Abida Perveen
MSc Engg (COMSAT, Wah)

Engr. Aasma Shafi Randhawa
BSc Engg (GC Uni, FSD)

Engr. Syeda Irum Jafri
BSc Engg (Taxila) MSc Engg (Taxila)

The Department

Established in 2007, Department of ecommunication 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 program involves study of complete telecommunication systems, technologies running on it and how these technologies can be developed. After successful completion of the Telecommunication Engineering degree, the graduates will gain a broad range of skills in the area of telecommunication with strong analytical and critical abilities. These graduates are ready to embark upon an exciting career in a diverse range of telecommunication technology-rich companies and industries. The department offers 4 years degree program of BSc in Telecommunication Engineering.

Program Objectives

With the immense increase in the demand

of telecommunication engineers, growth of global telecommunication industry, deregulation, privatization and rapid technological changes, UET Taxila established Telecommunication Engineering Department under the Faculty of Telecommunication and Information Engineering. The department aims in imparting high quality education to the students with hands on training on the latest and emerging telecommunication technologies. For their engineers to measure up to international standards, the Telecommunication Engineering Department is inducting the cutting edge technologies in the form of equipment and expertise in the form of faculty and professional training experts. This will help in achieving the University goals to produce engineers that are capable to take up any challenge in the industry and are able to perform their tasks efficiently with high precision.

The department offers undergraduate programs with the following objectives:

- Allow R&D and Professional Trainings in relevant technologies and areas including Information technology, Optical Fiber Systems, Digital Switching, Digital Subscriber Loop, Digital Radio systems, ISDN and Broadband Networks, Digital and Broadband Switching, Voice over IP, as well as Mobile and Wireless Communication Systems.

- Provide a pool of expertise for defining optimal technology paths for the evolution of telecommunication networks and services these experts will be able to design the future telecommunication networks in our country. They also provide consultancy services to the industry.

- To provide much needed technical manpower that are well versed with the myriad of new telecommunication products being floated in the world market today.

Program Outcomes

Upon successful completion of the Telecom Engineering program, graduate will:

- Understand and be able to apply principles of Telecom Engineering practice and process subject to realistic constraints.

- be able to analyze, document and track system requirements.

- be able to design, implement and maintain telecom systems.

- be able to verify and validate telecom systems.

- have an awareness of current industry standards and practices.

- be able to work in one or more application domains.

- understand and apply principles of team process and project management.

- be capable of independent learning.

- understand professional responsibility and the application of ethical principles.

Laboratories

a. Electronic System and measurements Lab

This lab is basically developed for the experiment of subjects like basic electronic, digital logic design. circut analysis and amplifiers and oscillators, ect. This lab is equppied with latest equipment and all required software packeges used for simulation purposes.

b. Microprocessor and Computer Architecture Lab

Experiments for the subjects like Microprocessor systems, Microcontroller and Embedded systems, are conducted in this laboratory, The lab is equipped with latest equipment and all required software used for simulation purposes.

c. Antenna and RF Lab

This lab is bascillay developed for the experiments of subjects like antenna and Wave Propagation and Antenna, RF, Microwave Engineering, moblie and wireless communication and saltellite communication. The lab is equipped with latest equipment and all required software packages used for simulation purposes.

d. Computing Labs

The purposes of this lab is to conduct the practical work for various subjects like introduction to computer,object oriented programming and numerical medthos etc. This lab is equipped with all the necessary hardware and software facilities.

e. Telecommunication Engineering Lab

The purpose of this lab is to conduct the simulation work for various subjects like computer communication network , Digital Communication, Antenna and wave propagation , etc. This lab is equipped with all the necessary hardwar and software facilities.

f. Telecommunication Innovation

Center:

This lab has been established with collaboration of Telecom industry to equip the TED with state of the art equipment and infrastrructure. The equipment donated by industry is in pracitce and functional.

g. Final Year Project Lab

This lab is developed for final year students for the purpose of development and completion of their final year degree projects.

Courses Under Semester System
BSc Telecommunication Engineering

1st Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
TE -101	Communication Skills	3	0
TE -102	Introduction to Computing	2	1
TE -103	Calculus & Analytical Geometry	3	0
TE-104	Introduction to Telecommunications	3	0
TE -105	Linear Algebra	3	0
	Total:	**14**	**1**
	Semester Total for Part-I & II	**15**	

2nd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
TE-106	Critical Reading & Writing	3	0
TE-107	Object Oriented Programming	2	1
TE-108	Islamic Studies	2	0
TE-109	Applied Physis	2	1
TE-110	Multivariable Calculus	3	0
TE-111	Pakistan Studies	2	0
	Total	**15**	**2**
	Semester Total for Part-I & II	**17**	
	Total for 1st Year	**32**	

3rd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
TE-201	Technical Report Writing	3	0
	ID Elective I	2	1
TE-202	Differential Equations	3	0
TE-203	Circuit Analysis	3	1
TE-204	Computer Aided Engineering Drawing	0	1
TE-205	Basic Electronics	3	1
	Total	**14**	**4**
	Semester Total for Part-I & II	**18**	

4th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
TE-206	Computer Communication & Networks	3	1
TE-207	Amplifiers & Oscillators	3	1
TE-208	Signals & Systems	3	0
TE-209	Digital Logic Design	3	1
TE-210	Probability Methods in Engineering	3	0
	Total	**15**	**3**
	Semester Total for Part-I & II	**18**	
	Total for 2nd Year	**36**	

5th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
TE-301	Electromagnetic Theory	3	0
TE-302	Control Systems	3	1
TE-303	Communication Systems	3	1
TE-304	Digital Signal Processing	3	1
TE-305	Engineering Economics	3	0
	Total	**15**	**3**
	Semester Total for Part-I & II	**18**	

6th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
TE-306	Digital Communication	3	1
TE-307	Wave Propagation & Antennas	3	1
TE-308	Wireless & Mobile Communication	3	0
TE-309	Microprocessors & Interfacing Techniques	3	1
TE-310	Professional Practices	3	0
	Total	**15**	**3**
	Semester Total for Part-I & II	**18**	
	Total for 3rd Year	**36**	

7th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
TE-401	Engineering Management	3	0
TE-402	RF & Microwave Engineering	3	1
	ID Elective-I	2	1
	MBC Depth Elective-I	3	1
TE-404	Final Year Design Project-I	0	3
	Total	**11**	**6**
	Semester Total for Part-I & II	**17**	

8th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
TE-403	Transmission & Switching Systems	3	1
	MBC Depth Elective-I	3	1
	Social Sciences Elective-II	3	0
TE-405	Final Year Design Project-II	0	3
	Total	**9**	**5**
	Semester Total for Part-I & II	**14**	
	Total for Final Year	**31**	
	Grand Total for Four Years	**135**	

Elective Courses for Telecommunication Engineering

Major Based Core (MBC) Depth Electives

Course No.	Course Title
TE-405	Multimedia System
TE-405	Digital Electronics
TE-407	Digital Image Processing
TE-408	Satellite Communication
TE-409	Optical Fiber Communications
TE-410	Telecom Policies and Protocols
TE-411	Telecom Traffic Engineering
TE-412	Spread Spectrum Communications
TE-413	Speech Processing
TE-414	Next Generation Networks
TE-415	Network Security
TE-416	Broadband Communication Networks
TE-417	Radar System Engineering
TE-418	Telecommunication Management Networks
TE-419	Compression Techniques
TE-420	Telecommunication Systems

IDE Electives

Course No.	Course Title
TE-211	Numerical Methods in Engineering
TE-212	Operating Systems
TE-213	Data Structure and Algorithms
TE-214	Database Management systems
TE-420	Embedded Systems
TE-421	Artificial Intelligence
TE-422	Reliability in Telecommunication Systems
TE-423	VLSI Systems

Social Sciences

Course No.	Course Title
TE-424	Organizational Behavior
TE-425	Psychology
TE-426	Public Policy
TE-427	Sociology
TE-428	Political Science
TE-429	Pakistani Culture and Society

DEPARTMENT OF COPMUTER SCIENCE

Chairman
Dr. Hafiz Adnan Habib
PhD (Taxila)

Associate Professor

Dr. Hafiz Adnan Habib
PhD Electrical Engineering (Taxila)

Assistant Professors

Dr. Khurram Shehzad
PhD Data Mining (UK)

Dr. Farrukh Zeeshan
PhD Telecommunications (Austria)

Dr. Zeeshan Iqbal
PhD Computer Engineering (Taxila)

Dr. Syed Muhammad Adnan Shah
PhD Computer Engineering (Taxila)

Syed Aun Irtaza
MS Computer Science (FAST)

Muhammad Munawar Iqbal
MS Computer Science (COMSATS), MCS (PU)

Lecturer

Rao Wakeel Ahmad
MS Information Technology (NUST), MCS (UOS)

Abid Rauf
MS Information Security (China)

Rashid Amin
MS Computer Science (IIUI)

Mehmoon Anwar
MS Computer Science (IIUI)

THE DEPARTMENT

The field of Information Technology, as we all know, is reshaping and transforming itself at a pace never witnessed before. We at the Department of Computer Science are fully cognizant of this and our goal therefore is to produce computer science graduates who can stay atop all these emerging trends. To realize the dream of becoming competitive beyond our national borders, we have hired a top-notch faculty with an overwhelming majority of its members having international academic credentials. It is exactly these people who funnel our research from theory to practice so that our graduates are well prepared for the real world that awaits them post-graduation. Furthermore, in order to ensure that our graduates also have a strong grip on the practical aspects of computing, we have instituted a strong liaison with industry as well as key players in the R&D sector. The Department of Computer Science offers BS, MS, and PhD programs in a broad range of specializations. What we have on our minds when designing the curricula is that the programs should not only cater to the needs of our country but also supply the industry with graduates who can play a leading and visionary role in improving their businesses and expanding their horizons so as to foster a strong nexus with multinational companies operating across the globe. Starting with our humble beginnings back in 2010, our dream here at the Department of Computer Science is to train our students in such a way that their chances of being employed after graduation improve significantly, which would then ultimately translate into more economic growth. We also aim to equip them with the exact skill set that would allow them to undertake new and innovative entrepreneurial ventures so that they can, in the long run, be in a position to create jobs rather than having to seek jobs. The Computer Science Department is working under the Faculty of Telecommunication and Information Engineering. Currently the second floor of the Central Library building is allocated to the department. The aim of the Computer Science degree programs is to produce computer scientists and IT professionals who can strengthen the backbone of a rapidly growing computer industry. The department is equipped with fully established computer labs such as the Computer Vision and Internet Data Applications (CVIDA) Lab, the Intelligent Systems Laboratory (ISL), Video Conferencing Room, and state of the art class rooms. In Computer Vision and Internet Data Applications (CVIDA) Lab, we aspire to develop intelligent algorithms that perform important visual

perception tasks such as object recognition, scene categorization, integrative scene understanding, human motion recognition, material recognition, Image Forensics etc. Another important focus of the lab is to meet the growing needs of data analysis that is present in the form of public and enterprise collections for various tasks, i.e. sentiment analysis, predictions, and trend analysis. The lab also offers skills enhancement opportunities to under graduate students by offering various e-commerce and mobile application development courses. The lab is equipped with all the necessary equipment and facilities required for final year projects and research thesis for under-graduate and graduate students. The Intelligent Systems Laboratory (ISL) aims to improve the productivity of neighbouring industrial organizations by using machine learning and data mining techniques. The long-term goal is to enhance cooperation between the university and the industry in order to achieve an accelerated pace of development along with mutual economic benefits.The ISL is furnished with the latest technology to support research on a variety of computing platforms. Many industrial organizations require tweaking process control parameters in order to reduce artifacts caused by inappropriate parameter settings. Innovative technology solutions based on Machine learning and Data Mining techniques developed at the ISL can help many of these organizations maximize their productivity and cost-effectiveness on account of better planning and decision making.

WHY STUDY AT THE DEPARTMENT OF COMPUTER SCIENCE?

The Department of Computer Science at the University of Engineering and Technology, Taxila comprises a highly vibrant and dynamic faculty whose primary focus is to teach courses that are relevant and in high demand as well as to supervise research in a variety of specializations. We pride ourselves in the quality of education and the thought-provoking learning environment we offer, thanks to our faculty consisting predominantly of PhDs who truly are the experts in their own fields. Our BS and MS degrees boast a worldwide recognition owing to the state-of-the-art instructional tools we use to impart education, the repute of UET Taxila as a major public sector engineering University, as well as the accreditation extended to us by the Higher Education Commission (HEC). The ability to create novel and effective IT solutions is something that cannot be overemphasized because there isn't even a single professional organization in today's world that can do without them, and so this is the single most important thing on our minds when training our students. Our graduates are well known for their problem-solving abilities due to their strong foundations in the theoretical underpinnings of computer science which gives them a clear-cut edge over graduates from other universities and allows them to enjoy a favorable opinion from employers nationally as well as internationally.

WHAT WILL I STUDY?

Semester 1 gives the students an opportunity to expose themselves to the world of Information and Communication Technologies. Modules such as Programming Fundamentals provide the students with the core knowledge to begin programming in any language and enable them to become acquainted with the basics of languages such as C++, Java, etc. The Object Oriented Programming course in Semester 2 introduces them to a new dimension in programming paradigm based on the concept of "objects". In Semester 3, the Data Structures and Algorithms module allows the students to get an insight into how the data can be organized in a computer for efficient usage, which usually is the key to designing efficient algorithms. Introduction to Database Systems enable the students to become acquainted with computer software applications whose primary function is to capture and analyze data by interacting with the user, other applications, and the database itself. Semester 4 begins with the Operating Systems orientation course which gives students the opportunity to familiarize themselves with the essential software that not only manages computer hardware and software resources but also acts as a common pool to provide services to computer programs. The Introduction to Software

Engineering course deals with all aspects of software production starting from the system specification stage up until the point the system has been put into use and needs maintenance subsequently. The Computer Organization and Assembly Language course equips the students with the skills needed to write assembly programs for faster codes for the simple reason that compilers are still not as smart as men are. It also enables them to write smaller codes for mobile devices which often have a limited amount of available memory. The Data Communication course offers a complete understanding of what makes up a computer network and data communications system such as the media, signals, encoding, bandwidth, cable modems etc and also allows the students to learn about local area networks and wireless networks.Semester 5 offers students the core course of Human Computer Interaction, the main emphasis of which is on the interfaces between users and computers and on how those interfaces could be redesigned and improved to optimize interaction. The Theory of Automata &Formal Languages enables students to understand the logic of computation pertaining to simple machines and also gives them an insight into how such machines compute functions and solve problems. The Advanced Object Oriented Programming course enhances the students' knowledge of object-oriented design concepts and further improves their proficiency in programming in object-oriented and procedural environments. Designing efficient algorithms is understandably a pre-requisite to developing efficient programs. The Design and Analysis of Algorithms course aims to do exactly that by providing the students with an opportunity to learn the fundamental principles of algorithm design as well as the basics of algorithm analysis. The Computer Communication and Networks module offered in Semester 6 explains not only the design of all modern communications but also how they are implemented,

for example email, web browsing, mobile phones, and file sharing and social networking applications. The Mobile Application Development course gives an in-depth treatment to the process whereby application software can be developed for handheld devices, such as mobile phones, personal digital assistants, or enterprise digital assistants.

In Semester 7, Software Design Project –I inculcates in the students the skills needed to put into solid reality what they learnt in previous semesters as well as to learn to participate in groups. The Compiler Construction course aims to develop an understanding of the theory and practice of developing programming languages along with their accompanying compilers. The Computer Vision module allows students to understand how computers perceive the visual world of humans, and familiarizes them with image acquisition and processing methods used to produce numerical or symbolic information. The Artificial Intelligence course gives students an opportunity to study the art of creating computer software capable of exhibiting intelligent behavior. Artificial intelligence is used in many areas across the technology industry such as data mining, medical diagnosis, logistics, etc. Some of its applications include translating between languages automatically, recommending new relevant products to customers, automated planning and scheduling, expert systems, speech recognition, and optical character recognition etc. Finally in Semester 8, Software Design Project–II develops in students the ability to work in teams with the ultimate goal of developing, testing, documenting, and putting into use a sizeable software project. Each project has to be formally presented and demonstrated by the developing team. In addition the Software Quality Assurance course equips the students with the skills needed to monitor the software engineering process by means of a variety of quality assurance methods. The Wireless Networks module gives insight into how to transmit data between different equipment locations such that the costly cables that would be needed for it otherwise could be avoided.

EXIT LEVEL OUTCOMES

The graduating students have the ability to (courtesy accreditation.org):

1) Work in a broad range of positions involving tasks from theoretical work to software development and demonstrate:
a. an intellectual understanding of, and an appreciation for, the central role of algorithms and data structures;
b. an understanding of computer hardware from a software perspective, for example, use of the processor, memory, disk drives, display, etc.
c. those fundamental programming skills to permit the implementation of algorithms and data structures in software;
d. those skills that are required to design and implement larger structural units that utilize algorithms and data structures and the interfaces through which these units communicate;
e. an understanding of software engineering principi-

ples and technologies so as to ensure that software implementations are robust, reliable, and appropriate for their intended audience.
2) Understand the possibilities and limitations of what computer technology (software, hardware, and networking) can and cannot do. There are three levels:
a. an understanding of what current technologies can and cannot accomplish;
b. an understanding of computing's limitations, including the difference between
what computing is inherently incapable of doing vs. what may be accomplished via future science and technology;
c. an awareness of the impact on individuals, organizations, and society of deploying technological solutions and interventions.
3) Understand the essential concept of process, in at least two meanings of the term:
a. process as it relates to computing especially program execution and system operation;
b. process as it relates to professional activity especially the relationship between product quality and the deployment of appropriate human processes during product development.

CAREER OPPORTUNITIES

The Bachelor of Computer Science degree can open the door to a world of opportunities for the graduating student. Employers are interested in not only the technical but also the non-technical skills that you have acquired during the course of the entire computer science program. So you should be able to figure out where this multitude of skills could lead you eventually by the end of your degree at UET Taxila.

Positions in high demand related to a computer science degree could include:
•	Database administrator
•	Information systems manager
•	Multimedia programmer
•	Systems analyst
•	Games developer
•	Systems developer

Apart from the above, positions where your degree may not earn you the maximum but would still be useful could include:
•	IT sales professional
•	IT trainer
•	Technical author

Whatever you choose ultimately, the important thing is that you don't restrict yourself to employers looking for computer science graduates only, there are also other employers who would still want to hire you regardless of the fact that they're not out there looking for the typical computer science graduate.

Typical Employers

Common employers are IT consultancies and IT service providers. The IT departments of major organizations in the telecommunications and information technology industry, aerospace and defense, accountancy and financial services, engineering and manufacturing, retail, public and third sectors also employ computer science graduates. Small to medium-sized enterprises (SMEs) have a wide range of opportunities, too.

Teradata, a multinational company which was originally a part of NCR, is always looking for bright and exceptional computer science graduates who can help them drive their businesses to new heights, which in turn can help their clients transform transactions into relationships. Furthermore, there are many software houses in Pakistan where there are ample opportunities for computer science graduates. Some of the most prominent ones include:

- NetSol Technologies
- TRG Tech Revenue
- System Pvt Ltd.
- Descon Revenue
- Si3 System Innovations

Apart from these, prospective employers also visit the UET Taxila campus towards the end of each year when a computer science batch is about to pass out, to conduct a recruitment test/interview and subsequently select promising candidates. Furthermore students can also find internships with any of the above mentioned IT companies as well as others to improve their chances of being hired afterwards.

And last but not least, graduating students also have the option of taking the entrepreneurship route by building a personal portfolio of their own projects, whether these involve programming, bug fixing, improving application functionality, or carrying out tasks online as a moderator.

PROGRAMME STRUCTURE OF BS COMPUTER SCIENCE

To complete the BS Computer Science degree:

1) The minimum credit hours shall be 130 including computing related courses.
2) The program shall comprise 8 semesters spread over 4 years with two semesters a year.

COURSES OF STUDY

In all matters regarding courses of study and others, the department strictly follows the policies and guidelines of
and it has surpassed all my expectations that I had at the time Higher Education Commission. The following are the relevant details of courses offered:

when I applied, I have had the opportunity to study with my fellow students coming from diverse backgrounds and cultures. The faculty at the Department of Computer Science is definitely second to none when it comes to offering captivating courses by people who know the stuff they're dealing with."

Courses Under Semester System
BS Computer Science

1st Semester		Credit Hours	
Course No.	**Course Title**	**Part I**	**Part II**
CS -101	Introduction to Information and Communication Technologies	3	1
CS -102	Programming Fundamentals	3	1
MT-101	Calculus and analytical geometry	3	0
EG -101	Functional English	3	0
PK -101	Islamic and Pak Studies	3	0
	Total:	**15**	**2**
		17	

2nd Semester		Credit Hours	
Course No.	**Course Title**	**Part I**	**Part II**
CS-103	Object Oriented Programming	3	1
CS-104	Discrete Structures	3	0
EG-102	Technical and Business Writing	3	0
MT-102	Probability & Statistics	3	0
EL-101	Basic Electronics	2	1
	Total	**14**	**2**
		16	

3rd Semester		Credit Hours	
Course No.	**Course Title**	**Part I**	**Part II**
CS-201	Data Structures and Algorithms	2	1
CS-202	Digital Logic and Design	3	0
EG-201	Communication Skills	2	0
MG-201	University Elective– I	2	1
MT-202	Linear Algebra	3	0
	Total	**12**	**2**
		14	

4th Semester		Credit Hours	
Course No.	**Course Title**	**Part I**	**Part II**
CS-204	Operating Systems	2	1
CS-205	Introduction to Software Engineering	3	0
CS-206	Computer Organization and Assembly Language	2	1
CS-208	CS Elective - I	3	0
CS-203	Introduction to Database Systems	3	1
MT-301	Multivariate Calculus	3	0
	Total	**16**	**3**
		19	

5th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
MT-302	Differential Equations	3	0
CS-301	Theory of Automata & Formal Languages	3	0
CS-302	CS Elective – II	3	0
CS-303	CS Elective-III	3	0
MG	University Elective- II	3	0
CS-306	Design and Analysis of Algorithms	3	0
	Total	**18**	**0**
		18	

6th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CS-304	CS Elective- IV	3	0
CS-305	CS Elective – V	3	0
MG-354	University Elective – III	3	0
CS-307	Computer Communication and Networks	3	0
CS-308	Computer Architecture	3	0
CS-309	CS Elective- VI	3	0
	Total	**18**	**0**
		18	

7th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CS-400	Senior Design Project-I	3	0
CS-407	CS Elective-VII	3	0
CS-401	Compiler Construction	3	0
CS-402	Human Computer Interaction	3	0
CS-403	CS Elective- VIII	3	0
CS-305	Numerical Computing	3	0
	Total	**18**	**0**
		18	

8th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
CS-400	Senior Design Project-II	3	0
CS-405	University Elective- IV	3	0
CS-406	Artificial Intelligence	3	0
SS-401	Professional Practices	3	0
	Total	**12**	**0**
		12	
	Total Credit Hours	**132**	

Computer Science Elective courses

Sr. #	Code	Course Title	Credit hours
1	CS	Operations Research	3 (3, 0)
2	CS	Simulation and Modeling	3 (3, 0)
3	CS	Computer Graphics	3 (2, 1)
4	CS	Digital Image Processing	3(2, 1)
5	CS	Digital Signal Processing	3(2, 1)
6	CS	Computer Vision	3(2, 1)
7	CS	Software Engineering	3 (3, 0)
8	CS	Advance Software Engineering	3 (3, 0)
9	CS	Principles of Programming Languages	3 (2, 1)
10	CS	Data Communication	3 (3, 0)
11	CS	Distributed Computing	3 (2, 3)
12	CS	Data and Network Security	3(3, 0)
13	CS	Wireless Networks	3(2, 3)
14	CS	Telecommunication Systems	3 (2, 1)
15	CS	Microprocessor Interfacing	3 (2, 1)
16	CS	Web Engineering	3 (2, 1)
17	CS	System Programming	3 (2, 1)
18	CS	Distributed Database Systems	3 (2, 1)
19	CS	Data Warehousing	3(2, 1)
20	CS	Numerical and Symbolic Computing	3(3, 0)
21	CS	Expert Systems	3(3, 0)
22	CS	Artificial Neural Network	3(3, 0)
23	CS	Fuzzy Logic	3(3, 0)
24	SC	Software Quality Assurance	3(3, 0)
25	SC	Advance Object Oriented Programming(JAVA)	4(3, 1)
26	CS	Network Analysis and Design	3(3, 0)
27	CS	Network Management	3(3, 0)
28	CS	Game Programming	3(3, 0)
29	CS	Cryptography	3(3, 0)
30	CS	Network Programming	3(3, 0)
31	CS	Cloud Computing	3(3, 0)
32	CS	Visual Programming	3(3, 0)
33	CS	Object Oriented Software Engineering	3(3, 0)
34	CS	Computer Law	3(3, 0)
35	CS	Computer Animation	3(3, 0)
36	CS	Modern Programming Language	3(3, 0)

University Elective Courses

Sr#	Code	Course Title	CreditHours
1	MG	Financial Accounting	3 (3, 0)
2	MG	Financial Management	3 (3, 0)
3	MG	Human Resource Management	3 (3, 0)
4	MG	Marketing	3 (3, 0)
5	SS	Economics	3 (3, 0)
6	PS	Psychology	3 (3, 0)
7	SS	International Relations	3 (3, 0)
8	SS	Foreign/Regional Language (French, German, Sindhi, Punjabi, Urdu etc.)	3 (3, 0)
9	SS	Philosophy	3 (3, 0)
10	MG	Introduction to Management	3(3,0)
11	QA	Quality Control & Engineering Standards	3 (3, 0)
12	QA	Quality Assurance and Management System	3 (3, 0)
13	QA	Quality Improvement Tools & Methods	3 (3, 0)

FACULTY OF BASIC SCIENCES AND HUMANITIES **6**

Dean
Prof. Dr. Mukhtar Hussain Sahir

DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

Chairman
Mahmood Akhtar

Assistant Professors

Dr. Nasir Siddiqui
PhD Mathematics (QAU, Islamabad)

Dr. Muhammad Zubair
PhD Physics (Harbin Engg. University, China)

Dr. Muhammad Sultan
PhD Chemistry (QAU, Islamabad)

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

Dr. Muhammad Muddassar
PhD Mathematics (UET, Lahore)

Dr. Muhammad Arshad Javed
PhD Physics (IU, Bahawalpur)

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

Mr. Zaffer Elahi
M. Phil Mathematics (UET, Lahore) (on study Leave)

Ms. Sumaira Nawaz
M. Phil. Islamic Studies (AIOU, Islamabad)

Ms. Naila Maqsood
M. Phil. Pakistan Studies (QAU, Islamabad)

Lecturer

Dr. Azeem Shahzad
PhD Mathematics (QAU, Islamabad)

Ms. Kulsoom Rahim
M.Phil Physics (QAU, Islamabad)

Mr. Muhammad Tariq
M.Phil Physics (QAU, Islamabad)

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)

Mr. Syed Sabyel Haider
M.Phil Mathematics (NUST, Islamabad)

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

Mr. Jawad Ahmad
M.Phil Mathematics (QAU, Islamabad)

Mr. Syed Muhammad Abdul Rehman Shah
MA Islamiyat (UOS)
MSc Economics (QAU, Islamabad)
MS Islamics Banking and Finance (IIUI)

Ms. Fareeha Zaheer
M.A English (NUML, Islamabad)

Ms. Mariam Batool
M.A English (PU, Lahore)

Ms. Tehmina Farrukh
M.A English (NUML, Islamabad)

The Department

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 Univesity in October, 1993, the department has been placed under the Faculty of Basic Sciences and Humanities.

The department offers courses in Mathematics, Physics, Chemistry, Economics, Statistics, Islamic Studies, Pakistan Studies, Ethics and English. Mathematics is an essential pre-requisite and pivotal element for various fields of engineering and other sciences. In fact it plays a key-role for the comprehension of any subject of engineering and physical sciences. A practical engineer needs an adequate knowledge of modern mathematics to successfully cope with the complex real world problems. Therefore, all the degree programs offered by different engineering departments of the university have courses in applied mathematics, statistics and numerical analysis.

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 so as to meet the pre-requisites of the engineering subjects. The contents of the courses are regularly revised so as 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 englighten 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.

In 1982 the Government of Pakistan also emphasized the need to teach the subject of Pakistan Studies to all students at degree level. The main purpose of this subject is to make the students to be acquainted with ideology of Pakistan. The Non-Muslims students are offered courses in the subject of Ethics as well.

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.

In future language lab will be established in the department so that students could practice listening and speaking skills. This project of language lab will be helpful to provide students an environment where they can practice language. Along with language lab, the department is planning to start spoken english courses in summers, especially IELTS and TOFEL for University students who want to go abroad for higher studies.

Research Extension and Advisory Services

The faculty members are actively engaged in research work and have produced a number of 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 and quantum 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.

The research in the subject of Islamic Studies is being carried out in the field of "Seerat-un-Nabi and Political System of Islam". Islamic Banking & Finance and Interest Free Islamic Economic System.

Postgraduate Studies and Research:

The Department started its Postgraduate Program in Applied Physics and Mathematics in 2014. After completing the course work post graduate sutdents of applied pyhsis will have to conduct research work in the following areas:

- Renewable Energy
- Material Sciences & Engineering
- Laser & Optics
- Simulation and Modeling
- Medical Physics

And the Postgraduate students of Mathematics will conduct their research work in the following areas:

- Fluid Mechanics
- Differential Equations
- Heat Transfer
- Group Theory
- Mathematical Analysis

To facilitate the Postgraduate students of UET Taxila in their research, the department has recently initiated and signed a research agreement with National Institute of Laser and Optoronics (NILOP) on April 30, 2014.

SERVICES & COMMON FACILITIES
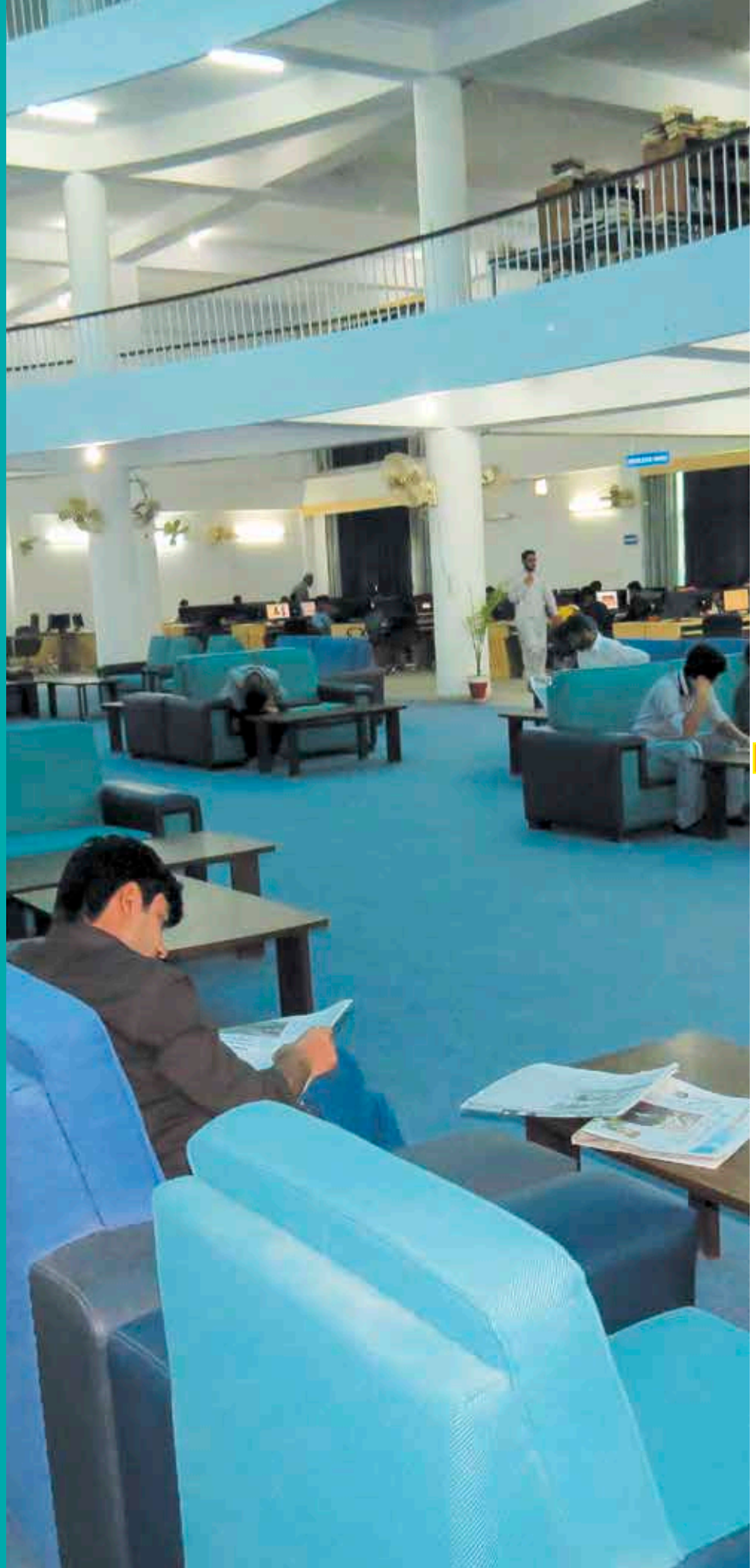
1. MAIN LIBRARY

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 - 10:00 pm
Saturday   08:00 am - 03:30 pm

2.LIBRARY RESOURCES

Library has 64754 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.

3.REFERENCE SECTION

Reference resources are located at the ground floor. They include the following:
(a)   **Reference Books,** dictionaries, encyclopedias, manuals, handbooks, and standards etc.
(b)   **Thesis/ Dissertations** of MSc. engineering students.
(c)   **Periodicals/ Journals**
(d)   **Computer Lab.** This lab consists of 100 computers with free access to internet and electronic resources.Readers' advisory service, reference services are provided to students, faculty members and research scholars. Reference resources are not issued to library users without permission of Librarian.

4. BOOK BANK

In this section textbooks are available. Students can borrow 08 (eight) textbooks for an academic session from this section.

5.CIRCULATION SECTION

This section plays a key role for providing the books to readers. The readers may contact the Assistant librarian regarding the matters relating to library membership, fine and clearance etc. The general books, engineering books and Islamic books have been shelved in the section. Library users can borrow books under the library rules. Books reservation facility is also available for library users.

6.ONLINE PUBLIC ACCESS CATALOG (OPAC)

Library has integrated library system. The resources are accessible at the following link:
http://192.168.24.5/library/lib/Library/Library.asp
OR

http://library.uettaxila.edu.pk/library/Lib/Library/Search.asp
     OR
by using the main university website.

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 journals, millions articles, thousands scholarly research thesis and many international databases free of charge through university intranet.
ebrary
HEC Digital Library subscribed e-books for Engineering Universities and Access at UET Taxila has been activated. Users of Central Library at University of Engineering and Technology, Taxila can access, read and download full text online books on a variety of disciplines including:
•   Engineering & technology.
•   Computer science.
•   Social Sciences and
•   Basic & applied Sciences.
To access the ebrary please use the following URL;
http://site.ebrary.com/lib/taxila
Library users have access to a wide range of databases, e-journals, online articles, dissertations and standards free of charge.

ONLINE ACCESSIBLE DATABASES

•   **INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)**
The IEEE/IEE Electronic library (IEL) provides access to almost a third of the world's current electrical engineering and computer science literature, featuring high-quality content from the institute of Electrical and Electronics Engineers (IEEE) and the institute of Electrical Engineers (IEE). To access the website please use the following URL http://www.ieee.org/ieeexplore

•   **ACCESS MEDICINE**
This is a dependable & innovative online resource that provides students, clinicians and researcher with instant answers to their clinical questions from the most trusted sources
• To access the website please use the following URL: www.accessmedicine.com

•   **AMERICAN SOCIETY OF MECHANICAL ENGINEERING (ASME)**
ASME serves this wide-ranging technical community through quality programs in continuing education, training and professional development, codes and standards, research, conferences and publications, government relations and other forms of outreach.
• To access the website please use the following URL: http://www.asme.org/

•   **AMERICAN SOCIETY OF CIVIL ENGINEERING (ASCE)**
An educational and scientific organization providing

access to journals related to Civil Engineering.
• To access this website please use the following URL:
   http://www.asce.org/

• **ASSOCIATION OF COMPUTING MACHENERY (ACM)**

The ACM Digital library contains over 1,385,000 full-text articles, including the full-text from 28 ACM journals and transactions,10 ACM magazines, over 40 ACM special interest Newsletters, over 100 annual conference proceedings (the proceedings archive currently has over 1800 volumes),and 15 non-ACM journals and publications. To access this website please use the following URL: http://acm.org/pubs

• **PALGRAVE MACMILLAN**

A dynamic publisher within the social science and humanities, with 31 authorities publications in areas of business management economics, education, information technology, political science, international studies ,social and cultural studies, urban design and architecture. Please access through the URL: http://www.palgrave-journals.com/pal/

• **ROYAL SOCIETY OF CHEMISTRY (RSC)**

  Access to journals, books and databases from the Royal Society of Chemistry. From this page, you can reach over 1 million chemical science articles and chapters. Explore the latest research using custom eAlerts, RSS feeds and blogs, or find content fast using the advanced search features. Frequently updated, it's all here waiting – discover the highest quality integrated scientific research today. View more about Royal Society of Chemistry publishing. Please access through the URL: http://www.rsc.org/is/journals/pri.htm

• **BENTHAM SCIENCE**

Access to 42 online scholarly journals from Bentham Science Publishing is available through the Ingenta Select aggregation service; Banthem Journals are renowned in Pharmaceutical Sciences, Drug design and discovery, Molecular medicine, Pharmacology, Biotechnology, Protein and Peptide science, Proteomics HIV research and Neuroscience. URL to access this website is: http://www.bentham.org

• **AMERICAN CHEMICAL SOCIETY ACS**

provides access to 3 million pages of original chemistry dating back to 1879.
Includes access to over 30 journals and magazines peer reviewed in all subjects of chemistry including core, applied, organic chemistry, bio chemistry, pharmaceuticals and polymers and material science. Please use the URL for this site: http://pubs.acs.org/

• **AMERICAM MATHEMATICAL SOCIETY (AMS)**

The AMS provide full text online access its 4 journals as well as the MathSciNet database, covering international mathematical literature since 1940. MathSciNet provides web access to the bibliographic data and reviews of mathematical research literature contained in the mathematical reviews database. Please use the following URL to access this website: http://www.ams.org/journals/

• **AMERICAN INSTITUTE OF PHYSICS (AIP)**

AIP journals comprehensively cover developments in physics, industrial applications, and advances in scientific computing, from 1975 to the present from a collection of 17 journals and conference proceedings dating back to 2000. Please use this link to access this site: http://journals.aip.org/

• **AMERICAN PHYSICAL SOCIETY (APS)**

The APS provide access to 9 prestigious research publications, including the five specialist physical Review publications, and the PROLA archive. The full-text of all APS journal articles all the way back to 1893 has been indexed made available. To access this website please use the following URL: http://publish.aps.org/

• **TAYLOR & FRANCIS JOURNALS**

Taylor & Francis have grown rapidly over the last two decades to become a leading international academic publisher, more than 1000 journal titles in a full range of disciplines.
To access this website please use this URL: http://taylorandfrancisgroup.com/journals/

• **SPRINGERLINK**

Springer link is one of the world's leading information services for medical sciences, social sciences and technological sciences. Springer link contains premier electronic data for 5,353,877 articles, 3,171,497 chapters from hundreds of text books, 466,877 entries from reference works and 38,700 protocols. To access this website please use this URL: http://www.springerlink.com

• **BLACKWELLSYNERGY**

Wiley online library has hundreds of thousands online resources includes but not limited to:
• Journals   (2346)
• Books   (16838)
• Book Series   (44)
• Database   (16)
• Lab Protocols   (18)
To access this website please use the URL: http://www.blackwell-synergy.com

• **OXFORD UNIVERSITY PRESS (OUP)**

Online academic database providing access to over 190 leading titles in science, technology, medicine, humanities and social science. OUP provides full-text ,abstract and TOC alert services a range of titles, with strength of content in Medicine, Public health and Epidemiology, Humanities, Social Science ,Law, Economics, and Business, finance, mathematics, statics, Computing and physics. To access this website please visit the following URL: http://www.oupjournals.org

• **JSTOR**

JSTOR's archival journal collections include more than two thousand journals in the humanities, social

sciences, and sciences. Both multidisciplinary and discipline-specific journal collections are offered, covering more than 50 academic disciplines. Please use this URL to access this website:http://www.jstor.org

- **SCIENCEDIRECT**

Science Direct is a leading full-text scientific database offering journal articles and book chapters from nearly 2,500 journals, more than 30,000 books and 13,397,561 articles on all subjects includingPhysical Sciences and Engineering, life sciences, health sciences, social sciences and humanities.
Please use the following URL to access this database: http://www.sciencedirect.com

- **SCIENCE ONLINE**

ScienceB Online's mission is to cultivate th e ways science is conducted, shared, and communicated online. We bring together a diverse and growing group of researchers, science writers, artists, programmers, and educators —those who conduct or communicate science online– for meaningful face-to-face conversations around timely, relevant issues. We nurture this global, ongoing, online community and facilitate collaborations which would not have been previously possible.
Science Online provides access to a huge collection of the proceedings of conferences on a variety of science subjects.
Please use the following URL to access this website: http://www.scienceonline.com

- **NATURE: INTERNATIONAL WEEKLY JOURNAL OF SCIENCE**

Nature is a weekly international journal publishing the finest peer-reviewed research in all fields of science and technology on the basis of its originality, importance, interdisciplinary interest, timeliness, accessibility, elegance and surprising conclusions. Nature also provides rapid, authoritative, insightful and arresting news and interpretation of topical and coming trends affecting science, scientists and the wider public.
Please use this URL to access the journal: http://www.nature.com/nature

- **AMERICAN SOCIETY OF MICROBOLOGY**

The 14 journals of the AMS cover the spectrum of microbiology, from molecular and cellular biology to biomedical research and technology.
Please use the following URL to access the journal: http://journals.asm.org/

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 Videoconferencing Hall at different sites. Besides the audio and visual transmission of meeting activities, videoconferencing can be used to share documents, computer-displayed information, and whiteboards.

9. DEPARTMENTAL LIBRARIES
Departmental Libraries in the following departments have been established.
- Civil Engineering Department
- Mechanical Engineering Department
- Telecommunication Department
- Industrial Engineering Department
- Computer Engineering Department
- Electronics Department

LIBRARY MANAGEMENT
1) Muhammad Anwar (Gold Medalist)
   (Librarian)
   +92-51-9047455
   librarian@uettaxila.edu.pk
2) M. Irfan Aslam
   (Deputy Librarian)
   +92-51-9047456
   irfan.mirza@uettaxila.edu.pk
3) Mushtaq Khan
   (Assistant Librarian),
   +92-51-9047457
4) Muhammad Safdar
   (Assistant Librarian)
   +92-51-9047293
   Muhammad.safdar@uettaxila.edu.pk

TECHNICAL JOURNAL

Technical Journal is a quarterly, double blind, peer reviewed, open access journal of University of Engineering and Technology Taxila. It covers all areas of Engineering Sciences and Engineering Management. UET roviding a platform to researchers and academicians from Pakistan and abroad as well to develop research culture in Pakistan. Technical Journal of UET Taxila is recognized by HEC in "Y" category. It is 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 by well recognized international databases such as PASTIC Science Abstracts, AGRIS Data Base, ProQuest Products and EBSCO's database products.

EDITORIAL OFFICE

Technical Journal Editorial Office was established on 05-09-13 at the 2nd floor of the Central Library University of Engineering and Technology Taxila. The existing Office has been declared Editorial Office permanently.

Office Bearer of Technical Journal:

1. Dr. Abdul Razzaq Ghumman
    Chief Editor

2. Engr. Mubashir Nawaz Warraich, TI
    Managing Editor

3. Muhammad Anwar
    Managing Editor

4. Asif Ali
    General Editor

5. Engr. Zaheer Ahmed
    Coordinator

6. Khalil Ahmed
    Composer

Editorial Team of Technical Journal:

A team consisting of subject specialists has been constituted on 05-09-13 to trace out innovation and research based papers from the papers which have been submitted to Technical Journal for possible publication during preliminary review of papers related to their area. They are also helpful in improvement of quality of research papers, getting review on papers from scholars of National fame and technologically advanced countries as per HEC requirements.

Technical Experts:

Dr. Naveed Ahmed
Editor (Civil Engineering)

Dr. Masood Shah
Editor (Mechanical Engineering)

Dr. M. Haroon Yousaf
Editor (Computer Engineering)

Dr. Nasir Siddiqui
Editor (Mathematics)

Dr. Wasim Ahmed
Editor (Industrial Engineering)

Dr. Ahsan Ali
Editor (Electronics Engineering)

Dr. Sarmad Sohaib
Editor (Electrical Engineering)

Dr. Khurram Shahzad
Editor (Software Engineering)

Dr. Khalid Bashir Bajwa
Editor (Telecom Engineering)

Engr. Sidra Iftikhar
Editor (Environmental Engineering)

Tehmina Farrukh
Editor (English)

Director Networks

Prof. Dr. Adeel Akram

Web Manager

Dr. Syed Muhammad Adnan

Mission

NARC Research Facilities

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 Program (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 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 providing 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 students in their semester 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 currently providing support in the following areas:
- Wireless Adhoc Networks
- Wireless Mesh Networks
- Network Routing
- Network Simulation
- Stateful inspection Firewalls
- Optical Fiber
- Secure VoIP communication
- Clusters and Grid Computing
- WiFi
- Blade Server
- Students Email Service using Google Apps
- Central Storage System for Faculty and Students
- Online Course Management System

NARC is working in collaboration with national and international technological leaders to provide state of the art equipment and cutting edge technology to the University.
NARC is also working as Cisco Local academy for CCNA & IT Essential certification courses.

DIRECTORATE OF ADVANCED STUDIES, RESEARCH AND TECHNOLOGICAL DEVELOPMENT (ASR&TD)

9

The Directorate of ASR&TD, which functions under the supervision of the Director, is the secretariat of the Board of Advanced Studies, Research and Technological Development. The Board comprises the Vice-Chancellor (Chairman), all the Pro-Vice-Chancellors, all the Deans, one University Professor from each faculty, one technologist, five members from the Industries and the Director of ASR&TD.

The Directorate performs a variety of functions to promote research, extension and advisory services in the University. The purpose of these functions is to:

a. Regulate MSc and PhD programs.
b. Provide funds and monitor faculty research.
c. Provide funds for M.Sc. Engg. and PhD research.
d. Approve thesis titles, supervisors and examiners.
e. Co-ordinate the Split PhD program with foreign Universities, Government of Pakistan.
f. Arrange visits of Pakistani Experts to give Workshops/Seminars in their field of expertise under TOKTEN program.
g. Arrange visits of foreign Professors to the University and vice-versa.
h. Award of Research Assistant-ships.
i. Sponsor collaborative research work in engineering and allied disciplines at the University and promote the research work.
j. Assist the Departments in organizing Post-graduate Programs, extension lectures and seminars.
k. Coordinate advisory services of the University for the benefit of the Government departments and industries.
l. Arrange evaluation of Research publications of faculty members and publishing of Research Journal of the University.
m. Make arrangements for Extension Lectures of Senior Professors from foreign countries, under the proposed British Council Specialists visits to Pakistan and TOKTEN Schemes.
n. Arrange for PhD Programs in the University.
o. Regulate an endowment fund for Higher Education and R&D in IT & Telecom Division at University of Engineering & Technology, Taxila, created for an amount of Rs. 100 million. The main objective for the establishment of endowment fund is to provide a continuous service of funding the University for producing around four PhD and six MSc in the field of Signal Processing every year. Fund would be available for man power development in the following fields:

(1)   Computer/Data communication
(2)   Image Processing
(3)   Simulation and Modelling
(4)   Wireless communication

5	**Faculty of Industrial Engineering**	Industrial	Institute of Industrial Engineers (IIE)

DIRECTORATE OF STUDENTS AFFAIRS 10

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 a large number of clubs and societies; each devoted to some sport or cultural and artistic activity. The students join these clubs and 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. The directorate also works to promote, amongst students, respect for the dignified and disciplined behaviors befitting a university student and prospective member of the honored community of engineers of Pakistan. Following are the committees and societies functioning at UET-Taxila.

- **Quaid-e-Azam Debating Society**
- **University Arts and Literary Society**
- **University Athletics and Sports Club**
- **An-Nisa Girls Scholars Society**
- **UET Adventure Club**
- **Environmental Protection Society**
- **Rashid Cheema Blood Donor Society**
- **Al Mohandis University Magazine, Varsity News**
- **Tehzeeb-ul-Ikhlaq Taxilian Character Building Society**
- **Students Counselling and Guidance Bureau**
- **Technical Societies***

Technical Societies*

Sr. #	Faculty	Department	Society
1	**Faculty of Electronics & Electrical Engineering**	Electrical	Institute of Electrical & Electronics Engineers (IEEE)
			Society of Innovative Electrical Professionals (SIEP)
			American Institute of Aeronautics and Astronautics (AIAA)
		Electronics	IEEE Consumer Electronics Society
2	**Faculty of Telecom & Information Engineering**	Computer	Taxilian Robotics & Automation Club (TRAC)
		Software	SOFTDESK
		Telecom	Society of Telecom Engineers & Professionals (STEP)
3	**Faculty of Civil & Environmental Engineering**	Civil	Society for Traffic & Road Safety (STARS)
			Institute of Civil Engineers (ICE)
4	**Faculty of Mechanical & Aeronautical Engineering**	Mechanical	American Society of Heating Refrigerating & Air Conditioning Engineers (ASHRAE)
			Institute of Mechanical Engineers (IMECHE)
			American Society of Mechanical Engineers (ASME)

DIRECTORATE OF UNDERGRADUATE STUDIES 11

The primary function of the directorate is to plan and organize undergraduate teaching and notify schedule for each academic session. The directorate coordinates academic activities of the departments and acts as liaison office between the academic departments for the smooth conduct of courses. It also monitors the teaching progress and ensures the timely completion of courses by the respective department.

The Directorate also assists the Students Section to the following matters.

a.   Registration of fresh entrants
b.   Scholarships and Stipends
c.   Migration Cases
d.   Verification of Documents

DIRECTORATE OF SPORTS 12

The University provides ample facilities to the students for participation in games and sports, both outdoors and indoors. A Sports Committee comprising University teachers supervises the sports activities. Facilities are provided for all the major sports including cricket, hockey, football, tennis, badminton, basketball, squash and athletics. A series of inter-faculty and inter-hostel tournaments are held to provide participation to the maximum number of students. Outstanding sportsmen are encouraged to take part in the inter-university tournaments.

The outstanding players are also participating in National level events likely hockey, volleyball and athletics. The exercise facilities are provided in the Gym in early morning and in the evening. Major types of fitness and exercise machines are available in the university.

HALLS OF RESIDENCES 13

The University has limited provisions for hostel accommodation at the Campus for both male and female students. The halls of residence for male students have an accommodation for about 1350 students and are named as:

- Iqbal Hall
- Quaid-e-Azam Hall
- Abu Bakar Hall
- Umer Hall
- Usman Hall
- Ali Hall
- Ayesha Hall (For Females)

Bilal hall with accommodation for 300 students is under completion. A separate hall for international students has been approved and will be constructed in near future.

Another Hall for female students has also been approved. It will have an accommodation for 100 students.

The management of the halls is supervised by the Senior Warden. Each hall is looked after by Resident Tutor/s being faculty members.

The students themselves manage many aspects of life in the halls. The halls are provided with common rooms, dining halls, canteens, mosques and other such places of common utility. Each hall has its own mess with adequate messing and dining facilities. The mess is run on a no-profit no-loss basis. A Students Mess Committee under the supervision of a Resident Tutor regulates the weekly menu, finances, billing and quality of the food.

The students are required to abide by the rules and regulations governing residence in the University halls and are encouraged to develop community life conducive to healthy growth of the social aspects of their personalities.

Internet Facilities in the Hostels

The University has 16 Mbps internet bandwidth from PERN (Pakistan Educational Research Network) and provides high speed internet connectivity to all resident students in the hostels. All the rooms of Iqbal Hall are connected with LAN of the University through five switches deployed at RT Room. These switches are connected to the Network Administration and Research Center (NARC) through optical fiber connectivity. The resident students are allowed to use LAN facilities in their rooms to make their assignments and other research work assigned to them. Quaid-e-Azam Hall is also connected through optical fiber with NARC, while the other hostels are connected through UTP cables. The students are provided with Wireless Connectivity in these hostels.

ESTATE OFFICE 14

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 a large number of visitors in the mornings and evenings. For the convenience of the students, a

shopping centre is located near the University hostels. This centre 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.

TRANSPORT 15

Adequate transport facility is provided for students and the buses are plying between Rawalpindi, Islamabad, Hassan Abdal, Wah Cantt. and the campus. 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.

DUES/SCHOLARSHIP SECTION 16

This section deals with all kinds of fee/dues, schlorships, stipends, loans and fee concession under the charge of the Treasurer. The University provides generous financial assistance to the meritorious and needy students. At present following schlorships/ 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	Scholarship/Stipend for Afghan Students	Ministry of The Inter Provincial Coordination Islamabad
4	Scholarship for IOK Students	Ministry of The Inter Provincial Coordination Islamabad
5	Students From Kashmir (AJK)	Kashmir Affair Division, Islamabad
6	ICT Scholarship	Ministry of Information Technology
7	Students From Fata & Baluchistan	Higher Education Commission, Islamabad
8	Need Based Scholarship	Higher Education Commission ,Islamabad
9	Scholarship for Army Children	Fauji Foundation
10	Talent Scholarship	Directorate of Education, Gilgit Baltistan
11	Talent Scholarship	Quetta, Directorate
12	Board Scholarship	FBISE, Islamabad
13	Board Scholarship	Concerned Directorates
14	Scholarship to needy Students	Pakistan Engineering Congress.
15	Scholarship to needy Students	Pakistan Diya Foundation

16	Scholarship to needy Students	Fauji Fertilizer Company
17	Scholarship to needy Students	Punjab Educational Endowment Fund, Lahore
18	Scholarship for Faisalabad Students	Killa Gift Trust
19	Scholarship for Muzaffar Garh Students	Gurmani Foundation Scholarship
20	Semester Fee to Students	Karwan-E-Ilam Foundation
21	Scholarship/Financial Assistance	Punjab Worker Welfare Fund, Organizations
22	Semester Fee to Needy Students	Pakistan Bait-Ul-Mal
23	Semester Fee to Needy Students	Bestway Foundation Scholarship
24	Loan For Needy Students	National Bank Of Pakistan
25	Semester Fee to Student+Mess Charges	(TFP Sch) A. Mateen Ansari Memorial Sch.(AMS)
26	Miscellaneous Finacial Assistance	Concerned Donors, Agencies & Corporations etc.
27	Schlorship For Needy Students	Saudi Arabian Center (IEP-SAC)

HEALTH FACILITIES   17

The University provides medical facilities to its employees and students. Salient features of the existing health policy for students are listed hereunder:

a. Students will be provided free consultation by the Medical Officer.

b. Available medicines will be issued to students through authorized prescription only.

c. Night dispensary service will be available in emergency only.

d. In acute emergency, where a student cannot move, immediate report 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.

e. Boarders will be required to fill in the proforma of previous medical history mentioning the disease he carries.

f. Indoor treatment from unauthorized medical attendants is not allowed.

ADMISSION/REGISTRATION OFFICE   18

The Section deals with matters relating to admission, registration and placement of students at undergraduate level and verification of documents, migration cases and miscellaneous certificates under the charge of Registrar.

PLACEMENT OFFICE   19

Placement Office is a recent addition to UET Taxila's support system for students. In spite of inertia and the lack of ownership on the part old faculty and staff, Placement Office is making progress due to highly motivated, customer focused two member team. Due to its open door policy and zero tolerance for bureaucratic attitude, students frequently visit the Placement Office. It is noted that during the last six months more than five hundred students have visited the office to discuss their employment and internship issues. Students have not only been guided to search the right placement opportunity, but have also been welcomed for feedback and in identifying placement opportunities.

Placement Office has to serve a big and diverse students body. There are more than 900 students of 6th semester for whom Placement Office helps finding internship. While same number of students of 8th semester visit the Office to get support for employment. This cohort of 2000 students is quite diverse in nature, as students belong to nine disciplines of engineering: Electrical, Electronics, Mechanical, Civil, Industrial, Computer, Telecom, Software, and Environmental Engineering. Focus of these students for their internships or employment is on different sectors of industry and economy, for instance, Electricity, Oil & Gas, Manufacturing, Fertilizer, Telecom, FMCG, Construction, Regulatory bodies, Consulting, Software houses, Strategic Organizations, and Cement Industry to name a few.

In some Higher Education Institutes, such as LUMS Lahore, there is a separate officer for dealing with only a few sectors of industry; for instance, one person dealing with energy sector. Placement Office is leaving no stone unturned to make linkages with the organizations in the aforementioned sectors of economy. So, the central activity of Placement Office is liaising with a diverse sector of industry.

Placement Office is providing following services:

• Facilitating students in finding internships

• Placement of all graduate students in their respective field of study

• Develop and manage industry relationships to seek employment and internships opportunities for students in industry.

• Maintaining rigorous and active linkages with recruiters through industry visits etc. for better recruitment results

- Liaising amongst recruiters, academic departments of UET Taxila, and its students for both on-campus and off-campus recruitment drives.
- Manage development of Graduates Profile Book/CD, to be disseminated to prospective employers
- Comprehensive recruitment data analysis for existing year and for trends across years
- Manage Placement Office's website
- Arrange career counseling and mentoring sessions by inviting industry experts for first and final year students in various key domains including résumé writing, cover letter writing, and interview skills etc.

Promoting Entrepreneurship

Due to slump in Pakistani job market, the Vice Chancellor has envisioned to motivate and support the students to start their own businesses. For this purpose, Placement Office has conducted many workshops.

In these workshops guest speakers were invited from Industry and academia to talk on different aspects of entrepreneurship. For instance, Prof. Dr. Shahid Qureshi, Director of Center for Entrepreneurial Development, IBA, Karachi, Ms. Sana Choudhary, Business Incubation Center, NUST, Islamabad, Mr. Jazib Zahir, Chief Operations Officer of Tintash (www.tintash.com), and Prof. Dr. Imran Khan, IBA, Karachi.

Bulleh Shah Packages Company Recruitment Drive

Prof. Dr. Shahid Qureshi talking on Entrepreneurship

In order to promote an entrepreneurial ecosystem in UET Taxila, Placement Office has helped in signing a Memorandum of Understanding (MoU) with Plan 9, the largest technology incubation center in Pakistan working under the auspices of Punjab Information Technology Board

Recruitment & Internships

Since its inception in October 2013, Placement Office has achieved following milestones:

Recruitment Drives:

Placement Office strives to build an enduring collaboration with industry and facilitates the employer in fulfilling their recruitment needs through on-campus or off-campus recruitment drives. These recruitment drives not only give the students an opportunity to search for secure employment before even completing their degrees, but also create valuable feedback from employers about the students. The feedback will be incorporated in the grooming of existing batches of students.

ZTE Internship Program

USEFP United states Education foundation in Pakistan

Following table gives a snapshot of on-campus and off-campus recruitment drives.

Sr. No	Name of Company		On Campus	Off Campus	Number of Students Participated in the drive
1	K-Electric		•		225
2	Huawei Technologies		•		318
3	NAYAtel		•		140
4	MOL Pakistan			•	40
5	SUPARCO			•	104
6	KRL			•	225
7	Mechcon Pvt. Ltd		•		3
8	Lafarge Pakistan		•		40
9	DH Fertilizers			•	70
10	Schlum berger			•	120
11	Kohat Cement Company Ltd			•	80
12	Mari Petroleum Company Ltd			•	60
13	ZTE		•		100

Internships

Sr. No	Company Name		Intern ships
1	Pakistan Telecommunication Company Limited		10
2	Public Works Department		20
3	Frontier Works Organization		05
4	Pakistan State Oil		10
5	Pak Elektron Limited (PEL		04
6	EA Consulting		02

7	National Logistics Cell		10
8	Sui Northern Gas Pipelines Limited		05
9	ZTL		11
10	National Electric Power Regulatory Authority		08
11	WAH NOBEL		02
12	SAMBU Construction Co. Ltd		07
13	DESCON Engineering		11
14	Attock Refinery Ltd		02
15	Pakistan Telecommunication Authority		20
16	KSB		03

Career Counseling & Employability Skills

Students in UET Taxila are coming from both rural and urban background. They generally have good command on their core courses, but lag the skills necessary to get a job in highly competitive market. Keeping the situation in view, Placement Office has started conducting workshops and one-to-one sessions for enhancing career and employability skills of the students. In order to achieve the objective, numerous workshops were conducted by the Placement Office staff. In addition, many industry experts have also been identified to conduct workshop in UET Taxila. These career counseling workshops will be held regularly for the students of final year. In sum, Placement Office heading toward a full fledge career services office.

Students are taking the test during On-Campus recruitment drive of Huawei Technologies.

QEC Quality Enhancement Cell

QUALITY ENHANCEMENT CELL

The Quality Enhancement Cell was established at UET Taxila on 7th February 2011 in Phase-IV under the directions of Higher Education Commission, Islamabad. It is entrusted with the task to promote education for effective management of standards and quality of programs at all levels. It requires the developing quality assurance processes and methods of evaluation to maintain high educational standards of UET. These academic activities at UET are being regularly monitored by Quality Assurance Agency (QAA), HEC through Quality Enhancement Cell (QEC).

QUALITY ASSURANCE

It is observed that almost all the national universities, have similar scheme of studies for respective degree programs with minor variations, thanks to the information sharing in the age of IT. But the quality of outgoing graduates from these universities is conspicuously variant. We need to accept, that most of the universities here do not meet the international quality criteria. It is this dismal state of affairs, where most of our efforts needs to be focused. This is the only way to achieve value addition, international competitiveness and consequently, socio-economic up gradation. Seemingly, this idea became the founding stone of the Quality Assurance Agency (QAA), formed by the HEC. It has evolved well organized policies with quantifiable parameters of quality, required to enhance the educational standards in Higher Education.

SELF ASSESSMENT OF THE PROGRAMS
PROGRAM TEAM

Self Assessment of academic programs is conducted by Program Team (PT), a group of professionals who are nominated by the head of the department. PT is responsible for writing of Self Assessment Report (SAR) and acts as a contact/focal group during the period of assessment process.

ASSESSMENT TEAM

Assessment Team (AT) is a group of professionals who will review the SAR prepared by the PT and give its findings in the form of AT Report. Self Assessment of following departments has been completed:-

* Electrical Engineering Department
* Mechanical Engineering Department

* Civil Engineering Department
* Computer Engineering Department
* Software Engineering Department
* Telecom Engineering Department
* Environmental Engineering Department
* Industrial Engineering Department
* Electrical Engineering Department- 2nd Cycle
* Mechanical Engineering Department- 2nd Cycle

Sub-Campus Chakwal

* Electronics Engineering Department
* Mechatronics Engineering Department

Self Assessment Process of following departments is under process:-

* Electronics Engineering Department
* Civil Engineering Department – 2nd Cycle
* Software Engineering Department – 2nd Cycle
* Computer Engineering Department – 2nd Cycle
* Telecom Engineering Department – 2nd Cycle

MEMBERSHIPS

University of Engineering and Technology, Taxila
is member of Asia Pacific Quality Network (APQN).

ESTABLISHMENT OF QEC'S AT AFFILIATES

In order to improve quality of education and monitor their academic pursuit, QEC's were established at following affiliated institutes of UET Taxila during 2014. SAR process has also been initiated at these institutes:-

* CASE, Islamabad,
* APCOMS, Rawalpindi,
* KICSIT, Kahuta, Rawalpindi,
* SCET, Wah Cantt,
* iUSE, Rawalpindi

QEC TEAM

Engr. Mubashir Nawaz Warraich, TI,	Director
Mr. Iftikhar Ahmad,	Deputy Director
Engr. Tauqeer Ahmed,	Lab Engineer
Mr. Syed Aftar Hussain Shah,	Naib Qasid

Teaching and Examinations

Regulations Relating to Semester System of Teaching and Examinations for Bachelor Degree Programmes of the University of Engineering and Technology, Taxila.

a. Short Title, Commencement and Applicability:

i. These Regulations shall be called "The University of Engineering and Technology Taxila Regulations Relating to Semester System of Teaching and Examinations for Bachelor Degree Programmes".

ii. These shall come into force with immediate effect for undergraduate degree Programmes of the University and will be a applicable for all enrolled students.

b. Definitions:

i. "Academic Council" means Academic Council of the University.

ii. "Academic Year" means a year normally consisting of two regular (i.e. Fall and Spring) semesters of 18-20 weeks duration each and one optional (i.e. Summer) semester of 9-10 weeks duration inclusive of examinations, internships or any other academic activity.

iii. "Board of Undergraduate Studies" means the Board of Undergraduate Studies of the concerned Academic Department of the University.

iv. "Candidate" means a student who intends to appear in an Examination.

v. "Casual Student" means a student who is not on the rolls of the University after passing out his session i.e. after completion of his minimum degree duration period but is otherwise eligible to take the courses and to appear in the examination. He shall, however, be governed by the University Examinations and Discipline Rules & Regulations.

vi. Chairman" means the Chairman of the concerned Academic Department of the University.

vii. Controller of Examinations" means the Controller of Examinations of the University.

viii. "Contact Hours" means the total number of lectures, tutorials and laboratory hours per week.

ix. "Course Teacher" means a person appointed by the competent authority, who teaches a course and then evaluates the students as per University rules and procedures.

x. "Credit Hour" means 1 hour of theory lecture or 3 hours of practical work in a course per week for the semester.

xi. "Cumulative Grade Point Average (CGPA)" means the credit-hour weighted average of the Grade Points earned for all the courses in all the semesters attended.

xii. "Dean" means the Dean of the concerned Faculty.

xiii. "Department" means an Academic Department of the University.

xiv. "End Semester Examination" means the examination to be held at the end of each semester on such dates as the University may determine.

xv. "Faculty" means the concerned Faculty of the University.

xvi. "Grade" means the letter grade earned by a student in a course depending on his performance in that course.

xvii. "Grade Points" means the points (numerical value) associated with each letter grade.

xviii. "Mid Semester Examination" means the examination to be held after eight (08) weeks of teaching in case of regular semesters and after four (04) weeks of teaching in case of optional semester on such dates as the University may determine.

xix. "Regular Student" means a bonafide student while enrolled during the minimum duration of a degree programme of this University and who does not maintain admission simultaneously in any other degree/diploma programme of this University or any other institution.

xx. "Semester" means a declared duration covering 18-20 weeks of teaching in case of regular semester and 9-10 weeks of teaching in case of optional semester including examinations.

xxi. "Semester Grade Point Average (SGPA)" means the credit-hour weighted average of the Grade Points earned for all the courses in a semester.

xxii. "Subject" means a course of studies as prescribed in the detailed syllabi approved by the competent authority, whose successful completion shall be the requirement of the Degree.

xxiii. "Syndicate" means the Syndicate of the University.

xxiv. "University" means the University of Engineering and Technology Taxila.
xxv. "Vice-Chancellor" means the Vice-Chancellor of the University.

c. **Explanations:**

In these regulations: -
The pronoun "he" and "its" derivatives are used for both male and female persons.
Depending upon the context, the words imparting the singular number include the plural number as well, and vice-versa.

d. **Academic Programmes:**

Bachelor of Science Degree shall be awarded in the following disciplines:

i. Civil Engineering
ii. Computer Engineering
iii. Electrical Engineering
iv. Electronic Engineering
v. Environmental Engineering
vi. Industrial Engineering
vii. Mechanical Engineering
viii. Software Engineering
ix. Telecommunication Engineering
x. Computer Science
xi. Mechatronics Engineering (ChakwalCampus)
xii. Electronic Engineering (Chakwal Campus)
xiii. Any other discipline as and when approved by the University Authorities

e. **Academic Calendar:**
The Bachelor's Degree Programme shall be spread over four academic years (i.e. minimum Eight Regular Semesters). Each academic year shall consist of two regular teaching semesters i.e.; Fall and Spring and an optional Summer semester. Summer semester shall be primarily for those students who want to repeat / improve certain courses to make up for their academic deficiencies. The minimum strength to offer a course in Summer Semester will be Five (05) students. How ever the Chairman of the concerned Academic Department may be empowered to decide the number of students to be registred in the courses offered in summer semester instead of the condition of minimum Five (05) students for final year only. Tecaching shall be manadtory for all offered courses in summer Semester. It shall be in the best interest of the students to clear their failed courses or the courses where theywant to improve their grades by repeating the courses as early as possible. The University will not be responsible to offer failed or improvement courses in the final year unless and until the other conditions of Summer Semester registration are met. In case of regular semesters (i.e. Fall and Spring) there shall be sixteen weeks of teaching.End Semester Examination shall be held in the eighteenth and nineteenth weeks. While in case of Summer semester, ninth week shall befor End Semester Examination. The Director Academics shall notify academic schedule of complete year for its Fall, Spring and Summer Semesters for the convenience of students and faculty members mentioning the following:
i. Semester registration date
ii. Semester starting date
iii. Mid semester examination week
iv. Semester termination date
v. End semester examination weeks

Students shall be responsible to meet the requirements and deadline published for each semester in the academic calendar. Students shall also be expected to know and adhere to the rules, regulations, course loads and policies of the University as well as those of the departments in which they are enrolled.

Part-I. GENERAL
a. The minimum duration of the degree programme shall be four academic years (i.e. Eight Regular Semesters). While the maximum duration allowed is seven years.
b. Notwithstanding anything to the contrary contained in these regulations, no candidate shall be admitted to an examination after the expiry of seven academic years. This period shall be counted from the date of his registration to the first semester in the University. Provided that in case a candidate is admitted directly to a higher class, he shall not be admitted to an examination after the expiry of the remaining period for the session to which he is admitted.
c. The total number of credit hours required for the award of degree shall be 130-136 while the number of credit hours per semester shall be 15-18. The courses of study, the credit hours allocated to each subject, the total credit hours offered in a semester and the detailed syllabi shall be as approved by the competent authority.
d. A minimum CGPA of 2.0 for the total semesters of a degree programme shall be required for the award of degree. The student affected by this regulation shall have the option to repeat the courses in which his grade is less than C- within the maximum allowable time period.
e. An academically deficient regular studentshall be allowed to repeat / improve the courses during the summer semester if offered as well as during the regular semesters whenever the teaching and examination schedule makes it possible for him to register himself for the courses and to take the end semester examination. While the academically deficient casual student shall be allowed to repeat/ improve the courses either during summer semester or whenever the teaching and examination schedule makes it possible for him

to register himself for the courses and to take the End Semester Examination. In case of repetition/ improvement of a course the student shall have to pay course registration and examination fee as prescribed by the University. It shall be noted that a student can only improve a grade lower than C- (i.e. D & F).

f. An academically deficient student (i.e. Regular and Casual) shall be allowed to get himself registered for two courses at maximum irrespective of the credit hours in a summer semester. The contact hours during the summer semester shall be doubled to ensure that the course is completely taught in a summer semester with half of the duration compared to a regular (Fall or Spring) Semester. An academically deficient regular student will also be allowed to get himself registered for two additional courses at maximum with lower semesters if offered with his regular semester. Whereas an academically deficient casual student will also be allowed to get himself registered for five courses at maximum with lower semesters if offered in regular semesters.

g. The registration, attendance, conduct of examination and result display policies etc. during the summer semester shall be same as in regular semester. Letter grade awarded during summer semester shall not be more than a 'B' grade.

h. The medium of instructions and examinations shall be English for all subjects except Islamic Studies and Pakistan Studies for which the medium of instructions and examinations shall be either Urdu or English.

Part-II. SEMESTER REGISTRATION
The registration of the students for each semester other than the first semester shall be made by the concerned Academic Department of the University. The registration for the first semester shall be made by the Registrar of the University.

a. The registration of the students for each semester shall be made in accordance with the Academic Calendar notified by the Director Academics. The application forms shall be obtained from the office of the Chairman of the concerned Department. The students shall submit the forms duly filled up to the Chairman of the Department. After necessary verifications, the Chairman of the Department will notify the list of registered students within ten days of the start of regular semester and four days of the start of summer semester. He will also forward these lists to all concerned within a week.

b. In case of a regular semester if a student misses his registration for cogent reasons, and applies for it within ten days of the notification of the list of registered students, he may be allowed to get himself registered with his class by the Dean of the Faculty concerned. He will, however, be required to pay re-admission fee as prescribed under the rules. He shall not claim any other relaxation in the rules governing teaching and examinations.

c. If a student fails to get himself registered for a regular semester within the prescribed time, his name shall be deemed to have been struck off the University Rolls and he shall not be allowed to take the classes and appear in any examination.

Part-III. ATTENDANCE EQUIREMENTS

No candidate shall be eligible to appear in an End Semester Examination unless the following conditions are fulfilled:

- He has been on the rolls of the University during the semester for which the examination is being held, unless allowed by the regulations to take examination in order to repeat/improve a course.
- He is not debarred from taking the examination under the University rules and regulations in-force for the time being.
- He has attended a minimum of 75% of the total number of lectures delivered, the laboratory periods held, design and practical work done in a course during the Semester for which the exams is being held. The Dean of the concerned faculty may, for valid reasons, condone this deficiency upto 10% on the recommendations of the Chairman of the department in consultation with the course teacher concerned.

d. If a student does not fulfill the condition of attendance, he shall be awarded an F-grade in that course and will have to re-register for that course in the summer semester if offered or in a regular semester in which the course is being offered.

e. The course teacher concerned will prepare the attendance record and will display and forward the list of such candidates who do not fulfill the condition of attendance to the Controller of Examinations through the Chairman of the Department and Deans Committee immediately after the completion of the teaching session. Such candidates shall not be allowed to appear in the end semester examination of that course.

f. At the end of each month, the teacher concerned shall send to Chairman of the Department, a statement giving the total number of lectures delivered and practical conducted by him together with the number of lectures and practical attended by each student.

Part-IV. CONDUCT OF EXAMINATION

1. **Students Evaluation System**

The performance of every student shall be continuously monitored and assessed throughout the semester. During the semester a student's performance shall be evaluated by taking quizzes, assignments, mid semester examination, laboratory reports, and project presentations etc. An end semester examination shall also be taken at the end of each semester covering the entire syllabus.

The course teacher shall be responsible for the evaluation of work/performance of the students of his class and for the award of grades to them on the basis of such evaluation.

2. Grading Mechanism

Course grades shall be awarded to the students preferably based on their relative performance in the course with minimum student's strength more than ten(10). Grading shall be usually carried out on the basis of normal distribution curve using statistical methods with preferably B as the class average, however, the course teacher's decision in this regard shall be considered final. Grades shall be indicated by letters. There shall be 4-letter grades i.e. A, B, C & D for individual courses with 9 performance levels e.g;

Letter Grades	Performance Levels
2 As	A & A-
3 Bs	B+, B & B-
3 Cs	C+, C & C-
1 D	Simple D
F	Fail
I	Incomplete

The grade points assigned to the letter grades shall be indicated as under:

Letter Grade	Grade Points
A	4.00
A-	3.70
B+	3.30
B	3.00
B-	2.70
C+	2.30
C	2.00
C-	1.70
D	1.00
F	0.00

The following guideline for the award of Letter Grades can be followed by the course teachers in case of absolute grading and project evaluation etc.

Marks (%age)	Letter Grade
90-100	A
85-89	A-
80-84	B+
75-79	B
70-74	B-
65-69	C+
60-64	C
55-59	C-
50-54	D
<50	F

3. Semester Grade Point Average (SGPA)

The semester grade point average (SGPA) shall be calculated by multiplying the grade points earned in a course with the number of credit hours of that course, taking the sum of such products for each course taken in that semester and finally dividing the result by the total number of credit hours attempted in that semester.

4. Cumulative Grade Point Average (CGPA)

The cumulative GPA (CGPA) shall be calculated similarly (as that for SGPA) for all the courses taken in all the semesters of the degree programme.

5. Evaluation Components

a. **Sessional Awards:**

(i) **Quizzes:** There shall be an appropriate number of quizzes (announced/announced) per course.

(ii) **Mid Semester Examination:** There shall be one mid semester examination of 1.5 to 2.0 hours duration per course in a semester after eighth week of teaching in case of regular semester and after fourth week in case of optional semester.

(iii) **Home Assignments / Mini Projects:** There shall be an appropriate number of Home Assignments and/or Mini Projects per course in a semester.

(iv) **Laboratory reports:** The students shall submit laboratory reports on each laboratory practical held, which the course teacher will evaluate. In this case each experiment, design, drawing, project or assignment shall be

considered an examination.

b. **End-Semester Examination**

There shall be one End-Semester Examination of 2.00 to 3.00 hours duration covering the entire course at the end of each semester. The examination shall be held in the last two weeks of each regular semester and last one week of Summer Semester.

6. Weightage of Evaluation Components

The final grade shall depend on the marks obtained in each of the evaluation components listed above. The weightage given to each component is as follows:

Evaluation Component	Weightage
Unannounced Quizzes	10%
Mid Semester Examination	20%
Home Assignments / Mini Projects	10%
Laboratory Reports	20%
End-Semester Examination	40%

In case of courses not having any laboratory / practical work, the weightage of End Semester Examination shall be 60%. While in case of courses having only laboratory / practical work, the weightage of laboratory reports shall be 100%.

7. Choice in Question Papers

There shall be no choice of questions in any of the evaluation components.

8. Absence from Examination

Absentees in any of the evaluation components shall be awarded zero marks whereas the absentee of end semester examination shall be awarded an F grade irrespective of sessional marks.

9. Maintenance and Display of Sessional Awards

a. The marked scripts of each examination component i.e. quizzes, assignments, mid and end semester examination answer scripts shall be shown to the students by the concerned teachers. In case a student is not satisfied with his awards and /or clarification from the teacher concerned, he may make written complaint to the Chairman of the Department who will refer his case to the Departmental Semester Committee and the decision of the Committee shall be final.

b. A student who fails to take his Mid Semester Examination due to some unavoidable circumstances (beyond his control) shall apply in writing to the Chairman for retaking mid semester examination before the End Semester Examination. The Chairman will refer his case to the Departmental Semester Committee for consideration and decision. The decision shall be communicated to the Controller

of Examinations in writing. In case a student is allowed to retake Mid Semester Examination, the examination will be conducted by the course teacher before the End Semester Examination on payment of prescribed fee by the student.

c. The teacher concerned shall prepare four copies of the sessional awards. He shall retain one copy with him; shall send one copy each to the Chairman of the Department concerned and the Controller of Examinations immediately after the completion of the teaching session. He shall also display a copy of the sessional awards on the Notice Board before the start of end semester examination.

10. Place and Conduct of Examination Date Sheet

The Controller of Examinations shall issue the date sheet for each mid and end semester examination. Mid Semester examination shall be held on consecutive days excluding holidays which means that no gap shall be allowed between the two papers. While the End Semester examination shall be held on alternate days.

12. Paper Setting and Marking of Scripts for End Semester Examination

The course teacher(s) shall be responsible to set the question paper covering the entire syllabus, mark the answer scripts and prepare the award lists.

a. The course teacher after setting the question paper shall get it photo copied by himself in accordance with the number of students and deliver it to the Centre Superintendent on the date of examination as per date heet.

b. On receipt of Answer Scripts from the Centre Superintendent on the same day, the course teacher shall mark the scripts for each examination and prepare the award lists on the prescribed form. After the end semester examination, he shall send the award lists (hard and soft copies) along with the marked scripts and question papers of Mid and End Semester examinations to the Controller of Examinations through the Chairman of the concerned department after a departmental faculty meeting under sealed cover within the specified time limit.

c. The course teacher(s) shall be responsible to ensure that there is no discrepancy in the marks entered in the award lists, the marks entered on the cover page of the scripts and the marks awarded to the questions in the scripts. A fraction of half or more shall be counted as one mark and less than half ignored in grand total only.

d. The time limit for marking the scripts shall be ten (10) days. If a teacher cannot mark the scripts within the prescribed time limit due to unavoidable circumstances, he may obtain prior permission from the Controller of Examinations for extension of time

before the expiry of the prescribed time limit. The extension in time limit shall, however, not be more than four days.

e. A deduction of Rs. 50/- per day will be liable to be made from the remuneration of the examinersfor delayed submission of results after the prescribed time limit.

13. Final Year Project

In the final year, students shall be required to do a project which is assigned four to six credit hours. A list of available projects shall be notified by the concerned department at the start of the academic year. Students shall be required to consult their faculty advisors for the selection of a project. Students shall be required to complete their projects and present their reports (in hard-bounded form) before the end semester examination of their eighth semester. A three members committee including the project supervisor nominated by the Chairman of the Department and approved by the Vice-Chancellor shall evaluate these projects at the end of eighth semester. The eighth semester project evaluation shall be held after the examination weeks and shall be followed by an open presentation

14. Summer Internship

Every student shall be required to participate in an eight weeks practical training programme during the summer of their second or third year and submit a formal report to the Chairman of the Department. How ever at least four weeks intership will be mandatory for completion of four years BSc Engineering degree program as per PEC requirements.

15. Final Award

The final award once received by the office of the Controller of Examinations shall not be liable to a subsequent change except with the permission of the Vice-Chancellor.

16. Notification of Result

As soon as possible after the completion of the examination, the Controller of Examinations shall notify the result.

17. Re-Checking of Answer Scripts

There shall be no re-evaluation of answer scripts of the end semester examination. However, a candidate shall be allowed to have his answer scripts rechecked by the Controller of Examinations on payment of prescribed fee within fifteen days of the declaration of the result. The Dean of the Faculty concerned may condone the delay up to a maximum period of ten days on payment of double fee. The Controller of Examinations shall certify that:-

a) The script has not been changed.
b) No portion of the script has been left unmarked.
c) The marks awarded in the script have been correctly brought out on its cover.
d) The grand total on the cover of the script is correct.
e) The grand total on the cover of the script is correctly transferred to the award list.
f) The result has been correctly posted and notified

18. Academic Deficiencies

A student, who obtains one or more of the following in a semester result, shall be considered academically deficient:

i) One or more "F" grades in a semester.
ii) One or more "I" grades in a semester
iii) SGPA less than 1.00 at the end of 1st semester
iv) CGPA less than 2.00

(a) Academic Dismissal

A student who fails to obtain a minimum GPA of 1.0 at the end of 1st semester of a degree programme shall be placed on academic probation for the 2nd semester. In case, he fails to improve his CGPA to 1.0 at the end of 2nd semester, his name shall be removed from the Rolls of the University. Students dismissed on academic grounds shall, however, be furnished with an official transcript indicating the course completed along with grades earned in registered courses.

(b) Re-admission

Re-admission in the first year, without going through the admission process, is granted to only those undergraduate students who have been dismissed on academic grounds but only for once. There is no second re-admission.

c) Relegation to Lower Semester

An academically deficient student can apply to the Chairmen of concerned department for Willing Relegation to lower semester to overcome his academic deficiencies. The Chairman will refer his case to the Departmental Semester Committee for appropriate decision which will be forwarded to the Controller of Examinations through the concerned Dean for Vice Chancellor's approval and subsequent notification. The Willing Relegation to lower semester can only be availed once during the entire degree programme subject to written consent of the parents / guardians.

19. Incomplete (I) Grades

A student may request for the award of an 'I' (Incomplete) grade, if for some genuine reasons (beyond his control), he fails to appear in an end semester examination or final project. 'I' grade will not be awarded for any other deficiency in a course (e.g. shortage in attendance etc). For the award of an 'I' grade, the student will apply on a prescribed form "i.e. 'I' Grade Application Form" to the Chairman of the concerned department, who will refer the case to the Departmental Semester Committee for consideration. The Departmental Semester Committee will make its recommendations based on the genuineness of the case and on the basis of his performance in mid semester examination, lab work, home assignments, quizzes, class participation etc.In case the

student is allowed an 'I' grade in a course by the Chairman of the Department on the recommendations of the Departmental Semester Committee, he would be allowed to take only End Semester Examination of that course on payment of prescribed fee. The 'I' grade must be completed before the commencement of the forthcoming End Semester Examination, failing which the 'I' grade will automatically be converted to 'F' Grade. "I" grade will not be awarded in Summer Semester.

20. Repeating Courses / Improving Grades

a)   If a student obtains 'F' Grade in any course, he shall have to repeat that or an equivalent course. Similarly whenever a student obtains a grade "D", he can repeat that course to improve his grade. A student shall be allowed to repeat a maximum of six courses to improve the grades during the entire degree programme.

b)   An academically deficient regular student will be allowed to repeat / improve maximum of two courses during a summer semester if offered as well as during a regular (Fall or Spring) semester whenever the teaching and examination schedule makes it possible for him to register himself for the courses, attend the classes and to take the Mid and End Semester Examinations. While the academically deficient casual student shall be allowed to repeat/improve if offered the courses either during summer semester or whenever the teaching and examination schedule makes it possible for him to register himself for the courses, attend the classes and to take the Mid and End Semester Examinations. Casual students can register for a maximum of Two courses in a Summer Semester and Five (05) Courses in a Post Eighth Regular Semester. In case of repetition / improvement of a course the student shall have to pay course registration and examination fee as prescribed by the University.

c)   As soon as a student is registered for a course, his previous grade for that course whether low or high shall be cancelled, and only the latest grade earned by the student shall be considered for the computation of CGPA. It shall be noted that a student can only improve a grade D and F.

d)   In case a student repeats a course which has already been taken, and in case a student takes a new course in lieu of the course in which he failed, both the courses alongwith grades will be reflected on his transcript.

21. Freezing of Semester

Students will be allowed to freeze a semester only once during the entire degree programme owing to some extreme and genuine reason to be determined by the Departmental Semester Committee. Students shall not be allowed to freeze their First and Second Semester(s), in any circumstances. Only those students who have completed their First Academic Year at the University shall be eligible to avail this facility. A student must apply to the Chairman of the Department, in writing, for freezing of one or two consecutive semesters within fifteen days of commencement of the semester. Students can request for freezing of at most two (02) consecutive semesters with Summer Semester not being counted. The Dean of concerned faculty will approve the request on the recommendation of the Departmental Semester Committee and Controller of Examinations shall notify the Freezing of Semester(s) accordingly. On his return, the student will be re-registered in the same semester with next junior class, in case of freezing two consecutive semesters and his courses shall be evaluated by the concerned Chairman of the department to determine their relevance to the changes made in the curriculum (if any). In such a case, the student shall be required to modify the degree plan in order to ensure conformity to the recent curriculum. Also, students will be required to pay the difference of University fee (if any) besides the re-registration fee. In case of freezing one semester, the student may re-join his own class. The deficiency created by frozen semester shall be made up after completing the remaining courses with his class i.e. after eighth semester by enrolling as a Casual Student. However, the students allowed to freeze their semester for proceeding abroad under Edcational Exchange Programs, will be elegible to register themselves for deficient courses in forthcoming Summer and / or Regular Semesters to overcome their academic deficiencies, provided the requirements for registration in Summer and/or in Regular Semesters (as additioonal coureses) are fulfilled as prescribed in the prevailing regulations. The maximum duration of the degree programme shall remain the same which will be considered from the date of his first semester registration including the frozen semesters.

22. Withholding of Comprehensive Result

The comprehensive result of a candidate, who is allowed to appear in the final semester examination while carrying courses of the lower semesters, shall not be declared till he clears the courses of lower semesters as a Casual Student. His Comprehensive result will be declared with the session in which he clears his last course of the degree programme. After the declaration of Final Semester Result, the students with status " Passed " shall be required to submit the " **DEGREE REQUIREMENTS COMPLETION FORM** " complete in all respects within four days of the notification. Failing which Comprehensive Result Notification will be issued and the students will have no claim to improve their grades afterwards. Also, the students with status "Passed" and interested in improving their grades (D grade) and the students with status "Failed" shall be required to submit the "CASUAL STUDENT ENROLLMENT FORM" complete in all respects, for registration as Casual Students.

23. Transfer of Credits

Transfer of credits shall be applicable only for those students who have been migrated to this University. Credits for only those courses shall be transferred which fulfill the following criteria:

- Credits can only be transferred from a PEC (Pakistan Engineering Council) accredited programme.
- A course with similar title, standard, duration, credit hours and matching course description is available in the relevant academic programme of the University. The course equates in description and laboratories work (if any) with the similar course of the relevant academic programme of the University. The duration of the course must be same or more than the duration of the course in the programme of the University.
- The candidate should have secured at least "B" grade in that course as per the grading system of the University.
- A maximum of 50% of the total credit hours of the relevant academic programme of the University shall be allowed for transfer.
- Transfer fee as prescribed by the University, shall be paid by the candidate.
- Transfer of credits is considered on the basis of course contents and credit hours to be decided by the Departmental Semester Committee.
- Transferred credits shall not be included in CGPA calculation however, will be reflected on the transcript as Transferred Credits.

24. Award of Degree

A candidate shall be admitted to the degree if:

a) He has earned total credit hours required for the degree within the prescribed duration of the degree programme.

b) He has obtained pass grades in all the courses offered in a semester.

c) He has passed all the semesters in the relevant discipline with at least 2.00 CGPA upto completion of a degree programme.

d) He has submitted the Degree Requirements Completion Form.

e) In case of the degree in Civil Engineering he has attended and satisfactorily completed annual survey camp organized by the University as certified by the Chairman of the Department.

25. Award of Honours

A candidate shall be declared to have obtained the degree with Honours and the fact shall be recorded on the provisional certificate as well as on the degree, provided that:

a) He has obtained CGPA of 3.7 or more.

b) He has completed the degree programme within the minimum duration as specified in the regulations.

c) He has not obtained 'F' grade in any course during the entire degree programme.

d) He has not improved any grade in the entire degree Programme.

e) He has not transferred any credit from other institutions.

26. Award of Medals

A candidate who fulfills all the requirements for the award of degree with Honours shall be entitled to the award of a medal for overall best performance on the basis of combined eight semester examinations result in each discipline.

27. Semester Grade Sheet

Obtaining of Semester Grade Sheets (SGS) at the end of each semester shall be mandatory for all students. Prescribed Fee will be charged at the start of each semester with semester registration fee and SGS will be issued to the students within ten days of their respective result notification without any application. The SGS shall indicate Courses alongwith Letter Grades, Grade Points, SGPA, and CGPA.

28. Transcript of Awards

A Transcript of Awards shall be issued to each student after completion of the degree programme on the payment of prescribed fee.

29. Provisional Certificate

A candidate who fulfills all the requirements for the degree shall be issued a provisional certificate on the payment of prescribed fee before the issuance of the degree. This provisional certificate will not itself confer any right or privilege for admission to the degree.

30. University Degree

The degree shall normally be issued to the graduates at the time of University Convocation without any fee. However, a graduate after obtaining the provisional certificate can apply for issuance of the degree before convocation on payment of the prescribed fee. The graduates who receive the degree in absentia after the convocation shall also be required to pay the prescribed fee.

31. Issuance of Certificates / Degrees

Subject to fulfillment of requirements and submission of application on prescribed forms with fee:

- Degree will normally be issued within two months of the receipt of the application.
- Any other certificate or duplicate copy (other than degree) will be issued within six days of receipt of application.

Note: A candidate shall deposit double the prescribed fee if he requires a certificate or duplicate copy (other than degree) within 24 hours.

32. Certificate Fees

The rates of fee for various certificates shall be as under:

a)	Semester Grade Sheet	Rs. 200
b)	Transcript of Awards	Rs. 1500
c)	Provisional Certificate	Rs. 1000
d)	Degree in Absentia/Degree Before Convocation	Rs. 2000
e)	Any other Certificate	Rs. 250
f)	Duplicate Certificate/ Degree	Double of the normal fee
g)	Verification fee of University Degree/Certificates:	
	Degree/ Transcript of Awards	Rs. 500 each
	S.G. Sheet/ Provisional Certificate/ Any other Certificate etc.	Rs. 250 each

33. Other Fees

a)	Semester Examination Fee	Rs. 1000/- per semester
b)	Summer Semester Registration Fee	Rs. 2000/- per credit hour
*c)	Registration Fee for Improvement of a Course during Regular Semester	Rs. 2000/- per credit hour
d)	Post Eight Semester Registration Fee	Rs. 2000/- per credit hour
e)	Fee for 'I' Grade / Mid Semester Retake Examination	Rs. 1000/- per course
f)	Rechecking of Answer Script Fee	Rs. 500 per script

*C : *In case a semester contains less than 21 credit hours and a student who is fail in the course or intends to enhance his CGPA shall be allowed in the same fee to take the course (s) ,if the credit hours do not exceed 21 credit hours. A student having 3.5 or above CGPA wants to take additional course(s) of his own discipline or any other discipline shall be extended an opportunity to fulfill the desire in the same semester fee if the credit hours donot exceed 21 credit hours.*
Note: *The rate of fee may be revised by the University Authorities from time to time and will be applicable to the currently enrolled students of previous entries also. Fee will not be refundable in any case.*

34. Disposal of Marked Answer Scripts
The marked answer scripts of a particular mid and end semester examina tions shall be retained in the office of the Cotroller of Examinations for a period of one Year. After this period, the scriptsshall be disposed off accordingly.

35. Departmental Semester Committee
1) **Constitution of the Committee**
Each Department shall have a Departmental Semester Committee constituted by the Vice Chancellor comprising the following:-
i) Chairman of the Department
ii) Two/ three senior most faculty members
iii) The teacher concerned may be co-opted in case of complaint of the students.

2) **Functions of the Committee**
• Ensure content coverage of courses by comparing test with the course outlines and work plan provided by the teacher.
• Monitor classroom activities as reflected in the course outlines.
• Examine all problems regarding uniformity before the declaration of results.
• Address and decide student's com plaints/appeals regarding sessional / grade awards.
• Examine & Approve students requests for Award of 'I' Grade, Freezing of Semester and Retake of Mid Semester Examination.
• Examine & Approve students requests for Willing Relegation to Lower Semesters only for the purpose of over coming their Academic Deficiencies.
• Examine & Approve Transferred Courses and corresponding credits for Migration Cases.

36. University Semester Committee
a. **Constitution of the Committee**
There shall be a semester implementation committee to be constituted by the Vice-Chancellor. The Committee shall consist of the following:
i) The Deans of all Faculties.
ii) The Director Quality Enhancement.
iii) The Director, Academics
iv) The Controller of Examinations.
v) The Deputy / Assistant Controller of Examinations (Secretary)

b. **Functions of the Committee**
i) Provide consultation to the Academic Departments converting to the semester system from the term system.
ii) Provide support in the implementation of semester system by arranging short courses for the faculty on its various aspects.
iii) Monitor the implementation of semester system.
iv) Address various issues arising with relation to the implementation of the semester system.
v) Recommend necessary amendments in the semester regulations, if needed.
vi) Examine and Approve students requests for Re-admission.

MIGRATION 22

22.1 Subject to the provisions of Regulations, the Vice-Chancellor may admit a student to the University by migration from other universities or institutions accredited by the Pakistan Engineering Council.

22.2 No student shall be admitted to first year and final year classes by migration.

22.3 No student other than regular student shall be allowed admission by migration.

22.4 Admission by migration shall not be allowed ordinarily after the expiry of three weeks from the commencement of the session.

22.5 No student shall be admitted by migration unless he produces a "No Objection Certificate" and good moral character certificate to the effect that:
   a. He has obtained not less than 2.8 GPA or equivalent in the examination on the basis of which migration is requested.
   b. He has neither been debarred from taking University examinations nor suspended nor expelled nor rusticated, for whatsoever reason, from the University or institution from which he intends to migrate.
   c. No disciplinary action is pending against him.

22.6 a. The application shall be accompanied by a detailed marks certificate showing the examination passed by the student including Intermediate (Pre-Engg)/BSc Examination on the basis of which he secured admission in the parent university or institution.
   b. No student admitted to any university or institution against seats reserved for special categories shall be eligible for admission by migration.
   c. Only those students, who have academic merit at par with the students admitted in this University on open merit in the respective classes, shall be considered for admission by migration.
   d. No student shall be migrated to the University who carries any of his papers of previous years.
   e. No migration shall be allowed to and from the constituent/affiliated institutions.
   f. Subject to eligibility under the regulations, the grounds for migration shall constitute changes in circumstances, which render it practically impossible for the student to continue his studies in his parent university or institution.
   g. Migration application will be entertained only on the prescribed application form,

obtainable from the Student Section, at the cost of Rs.500/-.
   h. A migration fee Rs 25,000/- (Twenty five thousand only) per year to be studied will be charged at this university.

22.7 A student desiring to leave this University in order to join another university or institution shall apply to the Dean of the Faculty concerned on the prescribed form.

22.8 The student will be required to clear all the university dues before he applies for migration.

22.9 In case of a student who has been debarred from taking University examination or has been expelled or rusticated, for whatsoever reason, No Objection Certificate shall not be issued so far as the punishment is in force.

22.10 The Registrar shall issue No Objection Certificate, which shall be valid only for sixty days.

22.11 A student who has obtained No Objection Certificate from this University, but has not secured admission in another institution, may be re-admitted to the University in the class to which he can be admitted under the regulations provided that:
   a. His absence from the current teaching session of that class does not exceed four weeks, and that
   b. He surrenders the No Objection Certificate.

22.12 Any changes/ additions/ modifications, if made in the above regulations, will also be applicable.

STUDENTS DISCIPLINE RULES 23

   a. These rules shall be called the "University of Engineering and Technology, Taxila (Students General Discipline) Rules, 1998".
   b. These Rules are in effect from 1998.
   c. Unless otherwise explained in the context or explicitly expressed, the following terms shall mean as defined in each case:
      (1) "Academic Department" means an academic department of the University.
      (2) "Committee" means the Students Discipline Committee of the Uniersity constituted by these rules.
      (3) "Country" means Pakistan in case of native students and in case of foreign students this term refers to the native country of such foreign students.
      (4) "Examination Hall" means a place

declared as examination hall or as such.

(5) "Hall of residence" means the hostel of the University or such place as may be declared as residence hall for students.

(6) "Student" means a bonafide student of the University, both native and foreign, in accordance with the respective rules.

(7) "University" means the University of Engineering and Technology, Taxila

(8) "Vice-Chancellor" and other officers /authorities mean the Vice-Chancellor and other officers / authorities of the University.

Note: The general pronoun "he" and its derivatives shall mean either of the sex, unless otherwise explicitly expressed.

d. Every student must observe the following code of honour:

(1) He must be faithful in his religious duties and respect the conviction of others in matters of religion and custom.

(2) He must be loyal to his country and refrain from doing things, which might lower its honour and prestige.

(3) He must be truthful and honest in his dealings with all people.

(4) He must respect the elders and be polite to all especially to women, children, old people, the weak and the helpless.

(5) He must respect his teachers and others in authority in the University.

(6) He must keep clean in body and mind, standing for clean speech, clean sport and clean habits.

(7) He must help his fellow beings especially those in distress.

(8) He must devote himself faithfully to his studies.

(9) He must observe thrift and protect property.

e. No student shall :–

(1) Smoke in his classroom, laboratory, workshop, library, examination hall or convocation hall and during studio work or academic functions.

(2) Consume alcoholic liquor or other intoxicating drugs within the University campus or hall of residence or examination hall or during the instructional, sports or cultural tours or survey-camp; or enter any such place or attend any such tour or camp, while under the influence of such intoxication.

(3) Organize or take part in any function within the University campus or a hall of residence or organize any club or society of students except in accordance with the prescribed rules and regulations.

(4) Collect any money or receive donations or pecuniary assistance for or on behalf of the University or any University organization except with the written permission of the Vice-Chancellor or any officer authorized by the Vice-Chancellor;

(5) Stage, incite, participate in or indulge in any walkout, strike or other form of agitation against the University or its teachers or officers.

(6) Interfere in the official proceedings of the examination or other University business.

(7) Threat or misbehave with the officers or other employees of the University or try to influence such officers or employees in any way in connection with their official assignments.

(8) Instigate or take part in any boycott of examination or create disturbance in or, around the examination hall.

f. Every member of the teaching staff shall have the powers (and it shall be his duty) to check disorderly or improper conduct or any breach of the rules by students occurring in any part of the precincts or the University. Should such misconduct occur in room when the student is under the charge of an instructor/supervisor, the latter shall report the matter, without delay, to the Chairman of the Department.

g. The Librarian shall be responsible for maintenance of order of the library. In case of disorderly conduct or any breach of rule he may require the student so offending to withdraw from the library for the remainder of the day and shall immediately report the offense to the Chairman, Library Committee.

h. The Senior Warden/Warden and the Resident Tutor shall be responsible for the maintenance of order among the students in hall of residence or hostels. The Director,

Physical Education shall be responsible for the maintenance of order among the students on or near the playground or while otherwise under his charge.

i. (1) There shall be a Students Discipline Committee, to deal with the serious cases of in-discipline, consisting of the following :–

   (a) Chairman, to be nominated by the Vice-Chancellor.
   (b) One member to be nominated by the Syndicate
   (c) One Member to be nominated by the Academic Council.
   (d) Two members not below the rank of Associate Professor, to be nominated by the Academic Council.
   (e) The Senior Warden, (Ex-Officio Member).
   (f) The Director Students Affairs, (Ex-Officio Member/Secretary)

   (2) The term of office of the members other than ex-officio members shall be two years.
   (3) The quorum for a meeting of the Committee shall be four.

j. The functions of the Committee shall be :–
   (1) To propose regulations to the Academic Council, and other authorities, for the conduct of the University students.
   (2) To maintain discipline and to guard against the breach of discipline.
   (3) To perform such other functions as may be prescribed.

k. A student shall be guilty of an act of in-discipline and shall be liable for each act to one or more of the penalties mentioned in Rule 23l(2), if he :–
   (1) Commits a breach of any of the rules of conduct specified in Rule 23e; **or**
   (2) Disobeys the lawful order of a teacher or other persons in authority in the University; **or**
   (3) Habitually neglects his work or habitually absents himself from his class without reasonable cause; **or**
   (4) Willfully damages University property or the property of a fellow student or any teacher or any employee of the University; **or**
   (5) Does not pay the fees, fines or other dues leviable under the University Act, Statutes, Rules, Regulations or Instructions; **or**
   (6) Does not comply with the rules relating to residences in the hostels or hall of residence or the Rules relating to the University Dress Code; **or**
   (7) Uses indecent language, wears immoderate dress, makes indecent remarks or gestures or behaves in a disorderly manner; **or**
   (8) Commits any criminal, immoral or dishonorable act (whether committed within the University campus or otherwise) which is prejudicial to the interests of the University; **or**
   (9) Humiliates, or causes to humiliate, his fellow student or a teacher or officer or other employees of the University; **or**
   (10) Possesses, carries or uses any type of weapons/fire arms or explosive material within the University premises; **or**
   (11) Spreads by word, mouth or written material, religious, sectarian, ethnic, regional or linguistic conflicts/hatred; **or**
   (12) Uses or takes possession of the University ransport unauthrosidely; **or**
   (13) Shows immodest/indecent or contra-Islamic behavior with fellow boy/girl student; **or**

l. (1) The penalty or penalties imposed shall be appropriate and proportioned to the nature and gravity of the act.
   (2) The penalties which may be imposed and the authority or authorities competent to impose each kind of penalty are specified in the table given below:

Sr. No.	Penalty	Authority Competent to impose the penalty
(a)	Exclusion from classroom Laboratory, Workshop or field work for the periods concerned, for not more than four such consecutive periods.	Teacher Incharge
(b)	Exclusion from the game or the field for not more than one week.	In charge of the game
(c)	Exclusion from instructional or sports tour or survey camp.	Teacher In charge or Tour In charge/ Chairman
(d)	Exclusion from the Department for a period not more than one year.	Heads of Department/ Chairman
(e)	Exclusion from the Library for not more than two weeks.	The Chairman Library Committee
(f)	Exclusion from all classes or any class in any Faculty for a period not exceeding one year.	Dean of the Faculty
(g)	Exclusion from the Hall of residence for a period not exceeding six months.	Resident Tutor, Warden, Senior Warden
(h)	Exclusion from the Hall of residence for a period not exceeding one year.	Senior Warden, Warden, Director Students Affairs
(i)	Suspension or removal from a position of authority in a hall of residence	Resident Tutor, Warden, Senior Warden
(j)	Suspension or removal from a position of authority in the Students Union, if any	Director, Students Affairs
(k)	Suspension or removal from a position of authority in the University Sports	The Chairman, Sports Committee
(l)	Cancellation or removal from a position of authority in the University Sports	The Chairman, Sports Committee
(m)	Fine up to Rs. 2000/-	Teaching Research Associate/Lecturer, Resident Tutor
(n)	Fine up to Rs. 5000/-	Assistant Professor, Warden
(o)	Fine up to Rs. 10000/-	Associate Professor
(p)	Fine up to Rs. 20000/-	Chairman of a teaching department, Professor, Senior Warden, Director Students Affairs, Chairman Transport Committee
(q)	Fine without any limit	Dean of the Faculty
(r)	Rustication from the University: i) for a period not exceeding one year	Chairman of the Deptt.
(s)	ii) for any period	Discipline Committee, Dean of the Faculty
(t)	Expulsion from the University	Discipline Committee
(u)	Withholding of result/s, certificate of good moral character etc.	Dean of Faculty, Chairman of Deptt. Discipline Committee

Note: The terms "Teaching Research Associate/Lecturer", "Assistant Professor", "Associate Professor" and "Professor" include non-teaching officers, in relation to these rules, holding the posts of corresponding pay scales.

m. (1) When a case against a student is referred to the Committee, the Committee may, if it deems fit, suspend the student from University Rolls and/or direct him to vacate the hall of residence till it has taken a decision in the case.

(2) Notwithstanding any thing contained in rule 23m(1), the Vice-Chancellor shall have the powers to impose any of the penalties mentioned in rule 23l(2) or to refer the case to the Committee.

(3) A teacher or officer mentioned in these rules in whose presence or in relation to whom an act of in-discipline is committed or who obtains knowledge of such act on a report or otherwise, may deal with the case himself or if in his view :–

   (a) the case is one which can be more appropriately dealt with by another authority; **or**

   (b) a penalty severer than that which he is competent to impose is called for in the case; shall follow the procedure specified below:

      i. If he is not the Dean of the Faculty he shall refer the case to the Dean who may deal with it himself or refer to the appropriate authority.

      ii. If he is the Dean of the Faculty, he shall refer the case to the Vice-Chancellor or the Committee.

(4) No student shall be rusticated or expelled from the University, unless he has been allowed reasonable chance of replying to the accusation against him.

(5) When in the opinion of the Committee the penalty of rustication or expulsion is not called for in a case referred to it, it may impose any other penalty or penalties mentioned in the Rule 23l(2).

n. When a teacher or officer has imposed penalty/penalties on a student under sub rule l(2) of rule 23, the latter shall not be liable to a higher or an additional penalty unless the he has been given a reasonable opportunity of showing cause against the proposed action.

o. (1) A review petition against the imposition of penalty may be made within a week's time to the teacher/officer who imposed the penalty.

In case the student is not satisfied with his decision/ revision he may appeal to theChairman, Discipline Committee who shall place it before the Committee for its consideration and decision within a maximum of six weeks to dispose off the case. A final appeal against the imposition of penalty may then be made to the Committee as provided in Rule 23o(2) of these Rules.

(2) An appeal against a decision on imposing a penalty mentioned in Sr. No.(r) and (s) of the table under rule 23l(2) shall lie with a committee comprising as mentioned below:

   (a) The Vice-Chancellor

   (b) All Deans of Faculties

   (c) One member to be nominated by the Syndicate.

   (d) The Registrar shall be the Secretary of the Committee.

(3) No appeal shall lie against a decision of an authority imposing a penalty other than that mentioned in Rule 23 o(1) of these rules except on theground that such authority has imposed a penalty which it was not competent to impose.

(4) An appeal on the ground that an authority has imposed a penalty, which it was not competent to impose, shall lie to the Vice-Chancellor.

(5) No appeal by a student under sub rule (1) or sub rule (4) of this rule shall be entertained, unless it is presented within fifteen days from the date on which the decision is communicated to him, provided that the Vice-Chancellor may, for valid reasons, extend this period up to thirty days.

p. TheVice-Chancellor or any teacher or officer to whom the Vice-Chancellor may delegate his powers, may direct

a student topay compensation for any loss,or damageto property belonging to the University or to a fellow student or to an employee of the University caused by a willful act or gross negligence of the student and if the student does not pay such compensation within a time to be specified, the Vice-Chancellor may expel him from the University and loss/damage/compensationbe recovered from his parents / guardians through legal proceedings.

q. Code of honour for Bus Routes:

(1) An individual traveling in the bus must respect the elders and be polite to all especially female students, women, children, old people, the weak and the helpless.

(2) All the students must respect the teachers and others in authority in the university.

(3) Cassette Player, singing songs, use of vulgar language, card playing, fooling, passing remarks using nick names and smoking, playing music on the mobiles, are prohibited.

(4) Hanging with door of buses is prohibited.

(5) Forcing driver/cleaner for undue delay, stoppage, changing route is prohibited.

(6) All individuals traveling in the bus must cooperate with the driver/cleaner.

(7) For complaints / suggestions contact Chairman Transport/DSA.

r. Policy to deal discipline cases in the bus routes:

(1) Any eventuality occurring in the bus routes will be immediately reported by the concerned driver/cleaner to the chairman transport through transport officer/office in writing. Failing to do so action will be taken against them as per E&D rules of the university.

(2) Keeping in view the gravity of the problem the Chairman Transport will serve first and second notice to deal the indiscipline during the bus routes. In acute circumstances the discipline committee empowers the following committee to deal the

indiscipline problems in bus routes:

(a) Chairman Discipline Committee
(b) Director Student Affairs
(c) Chairman Transport Committee

UNIVERSITY HOSTELS 24

24.1 Limited hostel accommodation is available at campus for male and female students. The rooms in the hostels are allotted on the basis of academic merit. However, a casual student or a studentinvolved in any act of misconduct, indiscipline, violation of rules or involvement in any political and bjectionable activities, shall be ineligiblefor hostel accommodation. If the attendance of a student is short, his hostel allotment shall be cancelled. He may apply for fresh allotment after the next semester if his attendance is up to the mark at that time.

24.2 A student shall not occupy a room without due allotment. He shall not transfer it to any other person, nor exchange it with another student without permission of the Senior Warden.

24.3 The furniture assigned to a room shall not be shifted from it. A resident shall be responsible for the articles issued to him and shall return them to the hostel authorities when leaving the room or hostel. He shall be responsible for making good, any loss or damage to these articles.

24.4 A resident who breaks or damages any University property shall have to pay the cost of the articles, in addition to any disciplinary action that may be taken against him.

24.5 The residents shall not tamper with the room fittings, nor shall they get the doors fitted with internal locks.

24.6 A room or any part of the hostel premises shall not be used **as an office, reading room, library or for any other similar purpose by a political, religious, regional or sectarian body of the students.**

24.7 The residents shall not leave lights, heaters or fans ON when the rooms are not in use.

24.8 The residents shall not use heaters and air coolers without payment of approved charges and prior permission of the Senior Warden. The use of room heater is restricted to 1000 W. Moreover,the use of electric heaters and air coolers is strictly phrohibited during generator (loadshedding) hours.In case of violation, the appliance/device shall be confiscated.

24.9 The residents are not allowed to use airconditioners, refrigerators, ovens or similar electrical appliances. A student who violates this

restriction will be liable to punishment under rules of discipline, and shall also pay the cost of any damages to the wiring or other fittings, which will be determined by the Senior Warden.

24.10 The residents are advised in their own interest, not to keep in their rooms cash or valuable articles like radios, transistors, tape-recorders, TV sets, mobile phones , laptops etc.

24.11 The residents shall be responsible for keeping their rooms tidy and clean. They shall not dispose off litter in the verandahs or other parts of the hostel premises.
Smoking is strictly prohibited in the hostel premises.

24.12 Every part of the hostel shall be opened to the hostel authorities for inspection at any time during day or night.

24.13 The residents are not allowed to wear immodest dress in the hostel.

24.14 The residents shall not keep in the hostel any fire arms or other weapons, even if licensed. Violation of this rule shall render a resident liable to expulsion from the University.

24.15 A resident shall not indulge in any amusement, which is likely to cause nuisance to others. Loud speakers, woofers and other instruments causing disturbance to other resident students are not allowed in the hostel premises. In case of violation, the appliance/device shall be confiscated.

24.16 Any religious ceremony likely to injure the sentiments of other residents shall not be performed in the hostel.

24.17 The residents are not allowed to gamble or to use any intoxicants and narcotics. Violation of this restriction shall render a resident liable to expulsion from the University hostel, in addition to any criminal proceedings that may be instituted against him under the Penal Law of Pakistan.

24.18 The resident students shall not be allowed to accommodate any body else with them. In case an unauthorized person or a non student is found residing in any room of the hostel, strict disciplinary action shall be taken against the resident students concerned which may result into immediate expulsion from the hostel.

24.19 Wall chalking, displaying of un-approved posters, pasting of unauthorized notices etc in the hostels as well as in the university premises is strictly prohibited. The students involved in such activities shall be punished in accordance with the University Discipline Rules.

24.20 The students are not allowed to form and/or join any unauthorized society, association or group etc in the hostels as well as in the university on regional, political and sectarian basis. The students showing affiliation with such associations will be dealt in accordance with the University Students Discipline Rules. Unauthorized gathering, arrangement of parties and tours etc and collection of donations by the students is also strictly prohibited in the hostels as well as in the university premises.

24.21 Guests may visit the male residents in the hostel between 9.00 a.m. to 7.00 p.m. The male residents shall not receive female guests in their rooms, but may see them in the place reserved for the purpose. The guests approved by the Senior Warden may visit the female residents in Girls Hostel between 4.00 p.m. to 7.00 p.m. only. The female residents can receive the guests in Guest Room only.

24.22 Guests are not allowed to stay overnight unless it is permitted by the hostel authorities and accommodation is available in the guest rooms.

24.23 The gates of the female hostel shall remain locked for the following hours:-
Summer:
2200 hours to 0500 hours (April to September)
Winter:
2100 hours to 0600 hours (October to March)

24.24 The female residents shall not meet their male guests in or around the hostel premises. A female resident shall not leave the Campus without the written permission of the Hostel Authorities.

24.25 Students will have to vacate the hostel accommodation within a week of the expiry of the final semester regular examination.

24.26 The Senior Warden may cancel the allotment of a student who violates the Students Discipline Rules of the University.

24.27 The resident students must respect every one specially the elders and the hostel staff. If he/she humiliates or causes to humiliate any one, strict disciplinary action shall be taken against him/her besides cancelltion of hostal allotment.

ALLOTMENT OF ROOMS IN HOSTELS 25

25.1 A student seeking accommodation in a University Hostel shall submit an application to the Senior Warden on the prescribed form. Allotment will be made by the Resident Tutors under the supervision of the Senior Warden. As far as possible international students shall be provided hostel accommodation.

25.2 Students residing within the limits of Taxila, Wah Cantt., Rawalpindi and Islamabad shall not be provided hostel accommodation, unless vacancies are available after accommodating students from outside the above limits.

25.3 The types of accommodation presently available in the hostels are;
(a) Cubicle
(b) Dormitory

25.4 The order of preference for allotment of the accommodation shall be as follows:

a. Final year students
b. Third year students
c. Second year students.
d. First year students

25.5 Within each of the categories mentioned in sub-rule 25.4 except category d, the order of preference shall be as follows:-
a. Students who have passed the next below regular semester examination, taken as a whole
b. Students who have failed in not more than three of the papers of the next below regular semester examination
c. Others

25.6 **Confinements:**
a. Hostel accommodation is not a right but facility provided by the University. It is solely the prerogative of the University to offer a place in the hostel.
b. A student, who fails to fulfill the degree requirements within the minimum prescribed time duration, shall not be allowed to reside in the university hostels.

UNIVERSITY DRESS CODE 26

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 grace and gentleness. Female students shall, preferably, wear a scarf and an overall sufficient to conceal their posture.

MISCELLANEOUS 27

27.1 **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 the course of such training.

27.2 **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.

ADMISSION PROCEDURE

GENERAL INSTRUCTIONS 28

28.1 The application along with the required documents should be submitted as early as possible. Please do not wait for the last date.

28.2 As soon as the process of selection is complete, the merit list will be notified showing the percentage of the applicants admitted in different disciplines against different categories.

28.3 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.

28.4 Any information regarding admissions can be obtained during working hours by calling Phone No: (051)9047412.
Members of the Admission Committee will also be available for consultation, in person, during admission period.

ELIGIBILITY FOR ADMISSION 29

29.1 Eligibility Requirements

a. An applicant for admission to any of Bachelor degree course offered by the University must fulfill the following requirements:

1. He should have passed the Intermediate (Pre-Engg) Examination with Mathematics, Physics and Chemistry from Board of Intermediate and Secondary Education of Pakistan or an equivalent examination so recognized by the University.

2. Intermediate or an equivalent with Physics, Mathematics and Computer Science shall be acceptable only for Computer, Software, Telecom Engineering and Computer Science.

3. Intermediate or an equivalent with Physics, Mathematics and Statistics shall be acceptable only for Computer Science.

4. He should have passed the examination (up to the latest annual examination) on the basis of which he seeks admission.

5. He should have obtained at least 60% unadjusted marks in examination on the basis of 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.

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

7. He should meet standards of physique and eyesight laid down in the medication certificate.

8. He should have appeared in the Entry Test for the respective session arranged by the University with the following combinations:

(English, Mathematics, Physics, Chemistry / Computer Science/Statistics.)

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

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

2) F.Sc. (Pre-medical) with Mathematics as an additional subject.

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

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

5) American High School Graduate Diploma (HSG Diploma).

6) Any foreign equivalent certificate or diploma accepted by IBCC (Inter Board Chairmen Committee).

Note:* **Applicants (Sr. No. 3 to 6) are required to attach an equivalence certificate (Pre-Engineering) issued by the IBCC, with the application for admission.**
The following is the address of the IBCC:
Inter Board Committee of Chairmen, Federal Board of Intermediate and Secondary Education Building, H-8/4, Islamabad, Pakistan.

29.2 Eligibility for Diploma Holders

a) For admission against seats reserved for holders of the Diploma of Associate Engineer, he should have passed the diploma examination from the **Punjab Board of Technical Education, Lahore** in the relevant technology, obtaining at least *60% unadjusted marks.*

b) Applicants seeking admission against seats reserved for the holders of diploma of Associate Engineer shall not be eligible unless their diplomas are in the relevant technology as specified against each degree course given below:

Electrical Engineering
- Diploma in Electrical Technology
- Diploma in Electronics Technology
- Diploma in Instrumentation Technology
- Diploma in Telecommunication Technology
- Diploma in Avionics Technology
- Diploma in Information Technology
- Diploma in Precision Mechanical & Instruments Technology

Electronics Engineering
- Diploma in Electrical Technology
- Diploma in Electronics Technology

- Diploma in Instrumentation Technology
- Diploma in Instrumentation and Process Control
- Diploma in Bio-Medical Technology
- Diploma in Avionics Technology
- Diploma in Telecommunication Technology

Mechanical Engineering
- Diploma in Mechanical Technology
- Diploma in Refrigeration and Air-conditioning Technology
- Diploma in Mechanical (Power) Technology
- Diploma in Mechanical (Production) Technology
- Diploma in Precision Mechanical & Instruments Technology
- Diploma in Auto and Diesel Technology
- Diploma in Dies and Mould Technology
- Diploma in Automation Technology
- Diploma in Bio-Medical Technology

Industrial Engineering
- Diploma in Industrial Technology
- Diploma in Mechanical Technology
- Diploma in Cast Metal and Foundry Technology
- Diploma in Mechanical (Production) Technology
- Diploma in Auto and Diesel Technology

Civil Engineering
- Diploma in Civil Technology
- Diploma in Land & Mine Surveying Technology
- Diploma in Architecture Technology

Mechatronics Engineering
- Diploma in Mechatronics Technology
- Diploma in Automation Technology
- Diploma in Instruments Technology
- Diploma in Electrical Technology
- Diploma in Electronics Technology
- Diploma in Mechanical Technology

Computer / Software Engineering
- Diploma in Computer Technology

- Diploma in Computer Information Technology
- Diploma in Telecommunication Technology
- Diploma in Electrical Technology
- Diploma in Electronics Technology
- Diploma in Software Technology

Telecom Engineering
- Diploma in Telecom Technology
- Diploma in Electrical Technology
- Diploma in Electronics Technology
- Diploma in Avionics Technology
- Diploma in Instrumentation Technology
- Diploma in Computer Information Technology
- Diploma in Software Technology

Environmental Engineering
- Diploma in Civil Technology
- Diploma in Chemical Technology

Note: **Diploma holders are eligible to apply in Category-I and Category-I1 in their specific field only. They are not eligible to apply in any other category.**

29.3 **Provisions about admission on the basis of a BSc Degree**

Given the qualifications and restrictions stated below, a person is eligible for admission to the Bachelor's Degree courses at the University on the basis of a degree of Bachelor of Science.

a. For admission to the BSc courses in any engineering discipline, an applicant must have passed the BSc Examination with Physics and Mathematics.

b. A person possessing a BSc degree is NOT eligible for admission to any Bachelors Degree course at the university unless he has also passed FSc. Pre-Engineering or Pre-Medical Examination.

29.4 **Gender**

Both male and female persons are eligible to apply for seats shown in the Seats Allocation Chart in section 30. The general pronoun "he" and its derivatives imply either of the sex.

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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	Mechanical	Electrical	Computer	Software	Telecom	Electronic	Industrial	Environmental	Computer Science	Total
A	Punjab	152	152	152	80	80	80	35	35	35	45	846
*B.	Sindh	1	1	1	-	-	-	-	-	-	-	3
*C.	Balochistan	2	2	2	-	-	-	-	-	-	-	6
*D.	Khyber Pakhtunkhwa	1	1	1	-	-	-	-	-	-	-	3
*E.	A.J.K. and Gilgit Baltistan											
	(i) Azad Kashmir	2	2	1	-	-	-	-	-	-	-	5
	(ii) Kel Area		(Open)									1
	(iii) Gilgit Baltistan	1	1	1	1	1	1	-	-	-	-	6
F	HEC Nominees from Balochistan and FATA	4	4	4	2	2	2	1	1	1	-	21
G	Disable Persons	-	-	-	-	2	-	-	-	-	-	2
H.	Foreign Nationals											
	(i) Foreign Countries	3	3	3	-	-	-	-	-	-	-	9
	(ii) Afghan Nominee		(Open)									1
	(iii) Bangladesh Nominee	1	2	1	-	-	-	-	-	-	-	4
	(iv) Indian held Kashmir	-	1	-	1	1	-	-	-	-	-	3
I.	Diploma of Associate Engineer	4	4	4	2	2	2	1	1	1	-	21
J.	Children of Armed Forces personnel											
	(i) Army	1	2	1	-	-	-	-	-	-	-	4
	(ii) Air Force	-	1	-	-	-	-	-	-	-	-	1
	(iii) Navy	-	-	1	-	-	-	-	-	-	-	1
K	Federally Administered Tribal Areas		(Open)									3
**L.	Backward Areas		(Open)									2
M.	Children of University Employees			(Maximum five seats in a discipline)								25
N.	Children of Graduate Engineers/ Architects/ City & Regional Planners	1	1	1	-	-	-	-	-	-	-	3
O.	Children of University Alumni		(Open)									1
Q1.	Tribal Areas of DG Khan District		(Open)									1
Q2.	Tribal Areas of Rajanpur District		(Open)									1
T	Tehsil Taxila		Maximum One seat in a discipline									2
X	Overseas Pakistanis Students	15	15	15	10	10	10	8	8	8		99
	TOTAL											**1074**

*   *Reciprocal Basis*
** *Following Backward Areas of Punjab:*
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 DIRSTRICTS.

SEATS ALLOCATION CHART 2015 ENTRY (SUB- CAMPUS , CHAKWAL)

	Categories	Electronic	Mechatronics	Total
W	Punjab	42	42	84
S	Chakwal Domicile	2	2	4
P	Tribal Areas of DG Khan	1	1	2
R	Federally Administered Tribal Areas	(Open)		3
Y	Gilgit Baltistan	1	1	2
Z	Children of Overseas Pakistanis	2	2	4
I(1)	Diploma of Associate Engineer	1	1	2
	TOTAL			**101**

CATEGORIES AND SYMBOLS 31

31.1 Category A (Punjab Province)
The applicant should be a bonafide resident of the Punjab province. The selection and allocation of disciplines are made according to merit.

31.2 Category B (Sindh Province)
The applicant should be a bonafide resident of the Sindh province. Applications are to be submitted to the Registrar of the Mehran University of Engineering and Technology or the Registrar of the N.E.D University of Engineering and Technology, Karachi. Diploma holders are not eligible to apply in this category. The last date for receipt of nominations at UET Taxila (irrespective of mode of communication or the date of postage) is 7days 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 Sind, Karachi.

31.3 Category C (Balochistan Province)
The applicant should be a bonafide 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. Diploma holders are not eligible to apply in this category. The last date for receipt of nominations at UET Taxila (irrespective of 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.

31.4 Category D (Khyber Pakhtunkhwa Province)
The applicant should be a bonafide resident of the Khyber Pakhtunkhwa Province. Applications are to be submitted to Registrar, Khyber Pakhtunkhwa University of Engineering and Technology, Peshawar. Nominations and allocation of disciplines are made by the Department of Education, Government of Khyber Pakhtunkhwa, Peshawar. Diploma holders are not eligible to apply in this category. The last date for receipt of nominations at UET Taxila (irrespective of 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..

31.5 Category E (AK including KEL Area & Gilgit Baltistan)
The applicant for the Azad Kashmir & Kel Area seats should be a national of Azad Kashmir, and the applicant for the Gilgit Baltistan seat should be bonafide resident of these Areas. 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.

For the seats reserved for the Gilgit Baltistan 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 Azad Kashmir and Gilgit Baltistan. Diploma holders are not eligible to apply in this category. The last date for receipt of nominations at UET Taxila (irrespective of 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.

31.6 Category F (HEC Nominees from Balochistan and FATA)
The applicant should be a bonafide resident of the Balochistan province or FATA. Applications are to be submitted to the Higher Education Commission (HEC), Islamabad. Nominations and allocation of disciplines are made by HEC. Diploma holders

are not eligible to apply in this category. The last date for receipt of nominations at UET Taxila (irrespective of 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.

31.7 **Category G (Disabled Persons)**
The applicant should be bonafide resident of Punjab Province. The applicants will have to furnish 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. 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. Diploma holders are not eligible to apply. The blind, deaf & dumb persons are not eligible to apply in this category.

31.8 **Category H (Foreign Countries)**
The applicant is required to get his application sponsored by his government, and sent in triplicate to the Ministry of Finance and Economic Affairs (Economic Affairs Division) Government of Pakistan, Islamabad, through Pakistan's representative accredited to his country. The applications should be accompanied by the following documents:
a.   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.
b.   Domicile/Nationality Certificate
c.   Passport
d.   Character Certificate
e.   Health/Fitness Certificate
f.   Information regarding the class and discipline in which admission is required. Nominations/Allocation of disciplines is made by the *Ministry of Finance and Economics Affairs (Economic Affairs Division) Islamabad.* The prescribed application forms may be obtained from the ministry. Diploma holders are not eligible to apply in this category.

31.9 **Category I (Diploma Holders)**
The applicant should be a bonafide resident of the Punjab province and should have passed the relevant diploma examination from the Punjab Board of Technical Education, Lahore. Selection and allotment of disciplines are made according to merit.

31.10 **Category J (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 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.

31.11 **Category K (FATA)**
The applicant should be a bonafide resident of the Federally Administered Tribal Areas. The applications are to be submitted to the Secretary, State and Frontier Regions Division, Government of Pakistan, Islamabad. Nominations and allocation of disciplines are also made by this Division. Diploma holders are not eligible to apply in this category. The last date for receipt of nominations at UET Taxila (irrespective of 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.

31.12 **Category L (Backward Areas of Punjab)**
The backward areas of Punjab include districts of Bahawalnagar, Bahawalpur, Attock, Rahim Yar Khan, Muzaffargarh, Layyah, Rajanpur, Bhakkar, Jhang, D.G. Khan, Chakwal, Mianwali and Jhelum. The applicant should be a bonafide resident of any of these districts. The selection and allocation of disciplines are made by the university according to merit. Diploma holders are not eligible.

31.13 **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 in the following order of preference. The selection is made by the university according to merit.
1.   Real children (having passed F.Sc) of those universityemployees whose services have been transferred to University of Engineering and Technology, Taxila vide office order no. 23, dated 11-11-1993.
2.   Real children (having passed F.Sc) of those university employees who have joined UET Taxila after 1993.
3.   Real children (having passed DAE examination in relevant field) of those university employees whose services have been transferred to UET, Taxila vide office order no.23, dated 11-11-1993 issued by UET, Lahore in accordance with UET, Taxila ordianance 1993.
4.   Real children (having passed DAE

examination in relevant field) of those university employees who have joined UET Taxila, after 1993.

5. However only a maximum one candidate will be admitted in one engineering discipline if the real children (having passed DAE Examination in relevant field) of an employee is eligible for admission subject to fullfilling the conditions as mentioned in subclause 3 & 4.The applicants have to furnish with their applications a certificate from the Registrar of the University on Form F-IX (available in Registrar's office).

Note:

i. 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.

ii. Candidates once admitted in pervious sessions under this category in 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 and admission will be granted on the merit position of candidates without taking care of 1993 bar.

31.14 **Category N (Children of Graduate Engineers)**
The applicant should be a bonafide 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. Diploma holders are not eligible.

31.15 **Category O (Children of University Alumni)**
The selection and allocation of disciplines are made by the University according to merit. 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. Diploma holders are not eligible.

31.16 **Category Q1 (Tribal Areas of DG Khan)**
The applicant should be bonafide resident of the area of D.G. Khan Tribal Areas. The selection and allocation of disciplines are made by the University according to merit. Diploma holders are not eligible to apply.
Applicant must furnish a certificate from the District Coordination Officer Dera Ghazi Khan verifying that he/she is a bonafide resident of the Tribal Areas of D.G. Khan District and his domicile should also depict that he is a resident of the tribal area of DG Khan.

31.17 **Category Q2 (Tribal Areas of Rajanpur)**
The applicant should be bonafide resident of the area of Rajanpur Tribal Areas. The selection and allocation of disciplines are made by the University according to merit. Diploma holders are not eligible to apply.
Applicant must furnish a certificate from the District Coordination Officer Rajanpur verifying that he/she is a bonafide resident of the Tribal Areas of Ranajpur District and his domicile should also depict that he is a resident of the tribal area of Rajanpur.

31.18 **Category T (Tehsil Taxila Domicile)**
The applicant should be a bonafide resident of Tehsil Taxila. The selection and allocation of disciplines are made by the university according to merit. Diploma holders are not eligible to apply in this category.

31.19 **Category X (Children of Overseas Pakistanis)**
Applications are to be submitted to the University according to the procedure and requirements laid down in this prospectus. Selection and allocation of disciplines are made by the University according to merit. The applicant is required to submit along with his application

i) 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.

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

Note: i) Only real children of overseas Pakistanis are are eligible to apply. Diploma holders are not eligible.

ii) Scanned / photocopied / Faxed documents will not be accepted. Only original attested copies from the concerned Pakistani embassy will be accepted.

iii) The residence permit / visa must be valid at least up till the closing date of submission of applications.

Categories and Symbols for (Chakwal Campus)

31.20 **Category W (Punjab Province)**
The applicant should be a bonafide resident of the Punjab province. The selection and allocation of disciplines are made by the university according to merit. Diploma holders are not eligible to apply.

31.21 **Category S (Chakwal Domicile)**
The applicant should be a bonafide resident of district Chakwal. The selection and allocation of disciplines are made by the university according to merit. Diploma holders are not eligible to apply.

31.22 **Category P (Tribal Areas of D.G. Khan)**
The applicant should be bonafide resident of the area of D.G. Khan Tribal Areas. The selection and allocation of disciplines are made by the university according to merit. Diploma holders are not eligible

to apply. Applicant must furnish a certificate from the District Coordinator Officer Dera Ghazi Khan verifying that he/she is a bonafide resident of Tribal Areas of D.G. Khan District and his domicile should also depict that he is resident of the tribal area of D.G. Khan.

31.23 **Category R (FATA)**
The applicant should be a bonafide resident of the Federally Administered Tribal Areas. The applications are to be submitted to the Secretary, State and Frontier Regions Division, Government of Pakistan, Islamabad. Nominations and allocation of disciplines are also made by this Division. Diploma holders are not eligible to apply in this category. The last date for receipt of nominations at UET Taxila (irrespective of 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.

31.24 **Category Y (Gilgit Baltistan)**
The applicant should be bonafide resident of Gilgit Baltistan. The applications are to be submitted to the Director of Education, Gilgit Baltistan. Nominations and allocation of disciplines are made by the Nomination Board of the Gilgit Baltistan. Diploma holders are not eligible to apply in this category. The last date for receipt of nominations at UET, Taxila (irrespective of 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.

31.25 **Category Z (Children of Overseas Pakistanis)**
Applications are to be submitted to the University according to the procedure and requirements laid down in this prospectus. Selection and allocation of disciplines are made by the University according to merit. The applicant is required to submit along with his application

i) 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.

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

Note:

i) Only real children of overseas Pakistanis are eligible to apply. Diploma holders are not eligible.

ii) Scanned / photocopied / Faxed documents will not be accepted. Only original attested copies from the concerned Pakistani embassy will be accepted.

iii) The residence permit / visa must be valid at least up till the closing date of submission of applications.

31.26 **Category I(1) (Diploma Holders)**
The applicant should be a bonafide resident of the Punjab province and should have passed the relevant diploma examination from the Punjab Board of Technical Education, Lahore. Selection and allotment of disciplines are made according to merit.

Note: Only one F-I is required in disciplines of Main Campus Taxila and Sub Camups Chakwal. The applicant should precisely and care fully fill the preferences table.

32.1 Examinations Considered for Merit

For admission to all the Bachelors Degree Courses and determination of merit the following examinations are considered:

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

32.2 Weighted Percentage

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

A)   For Applicants with HSSC (Pre-engineering) as the Highest Qualification

i)	HSSC (Pre-engineering) or Equivalent	70%
ii)	Entry Test	30%

B)   For Applicants with BSc OR BASc as the Highest Qualification

i)	BSc or equivalent	35%
ii)	HSSC or equivalent examination	35%
iii)	Entry Test	30%

C)   For Applicants Having Diploma of Associate Engineer as the Highest Qualification

i)	Diploma of Associate Engineer	70%
ii)	Entry Test	30%

32.3 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.

32.4 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.

32.5 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:

i)   fills in the necessary column provided in the application Form (F-I), and

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UNIVERSITY OF ENGINEERING AND TECHNOLOGY- TAXILA / UNDERGRAD PROSPECTUS 2015

ii) 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 Masjad Bilal UET, Taxila on the notified date and time. No separate call letters will be issued in this connection.

32.6 Determination of Merit 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 particular 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.

32.7 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 31. The details of the distribution of seats are available in the Seats Allocation Chart in Section 30.

The eligible applicants for each category are grouped separately. Then on the basis of 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.

32.8 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 on the basis of 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.

32.9 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 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 before the next merit list is displayed.

32.10 Variation in Seats

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

32.11 Typical Examples for the Calculation of Weighted Percentage for Admission

CASE 1:
Applicants having HSSC (FSc) or Equivalent as the highest qualification
Formula :
70×(HSSC marks obtained + NCC + HIFZ-E-QURAN)/(HSSC total marks)+ 30×(Entry Test marks obtained/ Entry Test total marks)
Example
An applicant who has obtained 848/1100 in HSSC and 300/400 in Entry Test. He has obtained Haifz - E - Quran Certificate as well.
% Admission Marks = 70×(848+20)/(1100)+30×(300/400)= 77.736 %

CASE 2:
Applicants having BSc or BASc as the highest qualification
Formula :
35×(HSSC marks obtained/HSSC total marks)+ 35×(BSc marks obtained + NCC + HIFZ-E-QURAN)/(BSc total marks)+30×(Entry Test marks obtained/Entry Test total marks)
Example
An applicant who has obtained 820/1100 marks in HSSC, 624/800 marks BSc and 360/400 marks in Entry Test, having also NCC certificate:
% Admission Marks =
35×(820/1100)+35×(624+20)/(800)+30×(360/400)
= 81.265%

CASE 3:
Applicants having Diploma of Associate Engineer as the highest qualification
Formula :
70×(Diploma marks obtained + NCC+HIFZ-E-QURAN)/(Diploma total marks)+ 30×(Entry Test marks obtained/ Entry Test total marks)
Example
An applicant 2570/3100 in Diploma and 240/400 in Entry Test. He has obtained NCC Certificate as well.
% Admission Marks =
70×(2570+20)/(3100)+ 30×(240/400) = 76.483 %

DISCIPLINES / CATEGORIES	A- Open Merit	G-Disabled Person	L-Backward Areas	O-Alumni	I-Diploma Holders	N-Children of Graduate Engineers	Q1-DG Khan Distt	Q2-Rajan Pur Distt	T-Tehsil Taxila	X-Overseas
Mechanical	75.711	-	77.543	-	71.435	77.625	68.457	65.566	78.777	65.88
Electrical	73.473	-	-	-	69.98	74.245	-	-	75.702	62.82
Civil	73.53	-	-	68.92	70.69	65.545	-	-	-	63.595
Electronic	71.17	-	-	-	69.234	-	-	-	-	59.134
Telecom	65.836	-	-	-	47.605	-	-	-	-	54.366
Industrial	69.795	-	-	-	69.838	-	-	-	-	56.632
Computer	68.455	-	-	-	60.328	-	-	-	-	51.089
Software	70.423	65.939	-	-	-	-	-	-	-	57.593
Environmental	64.457	-	-	-	-	-	-	-	-	61.616
Computer Science	63.016	-	-	-	-	-	-	-	-	-

Merits for the Session 2014 (Chakwal Campus)

DISCIPLINES / CATEGORIES	W-Open Merit	I-1 Diploma Holders	S- Distt. Chakwal Open Merit	P- DG Khan Distt	Z-Overseas
Mechatronics	64.534	67.674	64.52	59.83	57.791
Electronic	62.807	-	63.941	49.75	59.818

Note: The figures given in this table show "weighted percentage" based on all requisite components.

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DOMICILE REQUIREMENTS 34

34.1 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.

34.2 Applicants Required to Submit Additional Documents
Applicants for categories A, G, I, L, N, Q1, Q2, T, W, I-1, S, and P who have passed either the Secondary School Examination or 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 in support of their domicile.

34.3 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 form 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 sub para "a" above have to 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 form admissions.uettaxila.edu.pk) 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 form admissions. uettaxila.edu.pk)

  c. **Applicant Whose Father is not Alive** In case his 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.

34.4 Domicile Requirements for Children of the Armed Forces Personnel

In addition to the seats reserved for the category J, 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 has to submit with his application a certificate from the GOC of the area regarding the place of his parent's posting.

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35 DOCUMENTS TO BE ATTACHED WITH FORM F-I

An applicant must exercise great care in ensuring that his application form (F-I) is submitted accompanied by the required documents. An application shall stand rejected if any of the required documents is missing. No document shall be accepted after the last date for receipt of applications. The documents required from applicants for different categories are summarized below:

35.1 Documents to be submitted by All Applicants: (Attested Photocopies)

  a. CNIC/FORM-B

  b. Certificate of Secondary School Examination
(Detailed Marks Certificate).

  c. Degree, Diploma or Certificate of the examination on the basis of which admission is sought (i.e. FSc, BSc, or Diploma of Associate Engineer etc.). Results cards issued by the board/university are acceptable. Provisional Certificate in place of Degree/Diploma will not be accepted.

  d. Detailed Marks Certificate of the examination on the basis of which admission is sought.

  e. Domicile Certificate.

35.2 Additional Documents (Mandatory)
To whom applicable:

  a. If you have passed FSc. (Pre-medical), you have to submit an attested photocopy of the certificate for additional Mathematics.

  b. If you are seeking admission on the basis of BSc Degree you have to submit an attested photocopy of the FSc Certificate as well.

  c. If you are applying for **G** category seats, you have to 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.

  d. If you are applying for the **M** Category seats, you have to submit in original a certificate from the Registrar of the university on prescribed **Form F-IX**(Available in the Registrar's office).

  e. If you are applying for the **N** Category seats, you have to submit an attested photocopyof the relevant degree of your father or mother and renewed PEC registration Certificate.

  f. If you are applying on **O** category seats, you have to submit an attested photocopy of the educational degree/certificate of your parent as an 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.

  g. If you are applying on **P, Q1** or **Q2** category seats, you have to submit a certificate from the District Coordination Officer verifying that he is a bonafide resident of the tribal areas of respective districts

  h. If you are applying on **X** or **Z** category seats, you have to submit

    i) 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.

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

i. If you have successfully completed the **NCC** training and wish to claim 20 marks you have to submit an attested photocopy of the certificate issued by the Director General National Cadet Corps and Women Guards.

j. If you are claiming 20 marks for being **Hifz-e-Quran,** read clause 32.5 of the prospectus carefully.

k. If you are the 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 have to submitin original certificate from the **GOC** of the area about the place of your parent's posting.

l. If you are applying for any category requiring the Punjab domicile and you have passed either the Secondary School Examination or the Higher Secondary Examination from a Board or Institution not included in the Punjab/Federal Capital Area, Islamabad. You should read section 34.2 & 34.3 carefully to find out the additional documents, you have to submit alongwith **Form F-I**.

Note: **The Forms F-V, F-VI and F-VII are not to be submitted along with the application. They are required at the time of admission/registration.**

HOW TO COMPLETE THE APPLICATION FORM   36

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 Form (F-I).
On the web-link admissions.uettaxila.edu.pk, click on My UET button. Enter your ID Card/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**. Please fill the personal information, applicable options, Educational information and preferences . The candidate can **Sign in** again and again to see/edit his/her data until he /she submits his/her final printed application Form BY HAND in Admission Office, UET, Taxila.

Online Filling of Application Form:
After filling the Application Form online according to given instructions, applicant will get its prinout, sign it and attach requisite documents,along with the Declaration Form-(F-0, avaiable in the Prospectus) and then submit BY HAND in the Admission Office ,UET , Taxila

36.1   Only one application form is to be submitted for any number of disciplines and categories you apply for.

36.2   All entries should be in BLOCK LETTERS.

36.3   **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 Application Form in Admission Office.**

36.4   Under column "Discipline" use the following abbreviations:

Taxila Campus

Civil Engineering	**Civil**
Computer Engineering	**Computer**
Electrical Engineering	**Electrical**
Electronic Engineering	**Electronic**
Mechanical Engineering	**Mechanical**
Software Engineering,	**Software**
Telecommunication Engineering	**Telecom**
Industrial Engineering	**Industrial**
Environmental Engineering	**Environmental**
Computer Science	**CS**

Chakwal Campus

Electronic Engineering	**Electronic**
Mechatronics Engineering	**Mechatronics**

36.5   Under the column "Category" use only the symbols (i.e. A, G, I, L, M, N,O, Q1, Q2, T or X) for Main Campus and use the symbols W, S, P, Z or I-1 for Chakwal Campus.
For Example :

Sr. No.	Discipline	Category
1	Electrical	A
2	Electronic	A
3	Mechanical	A
4	Electronic	W

Now the above table shows that your:
- 1st preference is Electrical (Main Campus) for Open merit seats.
- 2nd preference is Electronic (Main Campus) for Open merit seats.
- 3rd preference is Mechanical (Main Campus) for Open merit seats.
- 4th preference is Electronic (Chakwal Campus) for Open merit seats.

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36.6 Deadline for Receipt of Applications

The application form complete in all respects along with the requisite documents should be sumitted Personally (by hand) in the Admission Office, UET, Taxila on or before the last date notified for submission of applications.

36.7 Incomplete Applications

Incomplete applications shall not be entertained. Application form, fee and the documents submitted with it shall not be returned on any ground.

PROCEDURE FOR THE SELECTED CANDIDATES 37

37.1 Notification of Selection

A list of selectees will be displayed on official University web site(admissions.uettaxila.edu.pk). The applicants can check the merit lists according to the schedule given in Section 40.

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.

37.2 Depositing of Dues and Documents

Within specified days mentioned in the admission schedule (Section 40), a selectee is required to pay the university dues and submit the following documents to the Convener, Admission Committee:

a. Bank Challan receipt in support of the University Dues deposited in the Habib Bank Ltd., Engineering University Branch Taxila.

b. 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.

c. Ten attested and most recent photographs.

d. Attested Certificate of parent's/ guardian's income.

e. Original degrees, certificates and result cards of SSC, FSc. BSc, GCE(A), Diploma of Associate Engineers or the equivalent qualifications and their duplicate attested photocopies.

f. Original Marks Sheet of Entry Test.

g. Original NCC certificate.

h. Original Domicile certificate.

i. Attested photocopy of National Identity Card/Form B.

j. Bio-Data Sheet (F-VI) duly completed.

k. Undertaking (F-VII) on a Rs.100/- judicial paper duly completed.

37.3 Relaxation in Time Limit

If a selectee is prevented by unavoidable circumstances from timely fulfillment of the requirements laid down in 37.1 and 37.2, 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.

37.4 Forfeiture of Right for Admission

A selectee who fails to fulfill the requirements laid down in 37.1 and 37.2 within the prescribed time limit shall forfeit his right of admission and **will not be considered in subsequent merit lists.**

37.5 Provisional Admission

On fulfillment of the obligations mentioned in 37.1 and 37.2 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 29 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.

37.6 Deadlines for Admission

Admission shall be closed from date as given in admission schedule (clause 40).

37.7 Notification of Selection of Categories B, C, D, E, F, H, J, K, R, Y

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.

FEES AND OTHER CHARGES 38

38.1 The following fees and charges are to be paid by the students admitted to the bachelor degree courses. The same are subject to revision/modification by the University authorities at any time without prior notification.

Subject	Open Merit and all other categories except X & Z	Children of Overseas Pakistanis Categories X & Z
Non-Recurring (Payable at the time of admission)	**(In Pak. Rupees)**	**(In Pak. Rupees)**
Admission fee/Re-admission Fee	2000	5000
Registration Fee	2000	2000
University/ Library Security (Refundable)	10000	10000
Survey Camp Charges (for Civil Engg. Only)	1500	1500
Students Bus Card Fee	30	30
Students Identity Card Fee	125	125
Verification Fee	1000	1000
Recurring Fee (per semester)		
Tuition Fee	26000	90000
Tutorial Fee	200	200
Inter-University Tournament Fee	200	200
Magazine Fee	200	200
Medical Fee	500	500
Library Fund	500	500
Book Bank Rent	300	300
Instructional Tour Fee	500	500
Recreation Fee	600	600
Bus Fare for Resident	1500	1500
Bus Fare for Non-Resident	6000	6000
Stationery Charges	100	100

38.2 For Examination Fees, see the relevant section.

38.3 The University also grants fee remission and fee concession on merit as well as need basis. Students are directed to maintain their own personal record of original receipts of dues till clearance to avoid problem in future. Non production of original Dues receipts on demand can be considered as non deposit of fee.

38.4 The Dean of the concerned faculty, on the recommendation of the Chairman concerned, may grant extension in payment of dues to the needy students on cogent reasons recorded in writing for a maximum period of 60 days beyond the schedule of the dues circulated by Dues & Scholarship Section. He / she may also allow the payment of dues in TWO installments. However, remission of late fee fine or re-admission fee cannot be waived off if extension is not allowed by Dean beyond the extension period.

38.5 Once a student is registered, no refund of any amount deposited by the student for admission, except the securities, shall be allowed in any case at any stage.

38.6 (i) 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.

38.6 (ii) Financial assistance / Scholarship received from Pakistan Bait Ul Mall Scheme or any other agency / organization for a student will be adjusted against 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 cancelled 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.

38.7 **HOSTEL CHARGES**

	(In Pak. Rupees)
Hostel Security (Refundable) Payable at the time of admission	5000
Mess Security (Refundable) Payable at the time of admission	3000
Service and Contingency Charges (Payable at the time of admission)	1000
Room Rent (Per Semester)	
Cubicle	1500
Dormitory	1200
Electricity Charges (Per semester)	2400
Room Heater/fans	1800
Sui Gas Charges	600
Air Cooler Charges (per session)	1200

38.8   **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. Electricity charges for fans are payable for summer session and will be charged with the fee during spring semester. While the electricity charges for room heaters are payable for winter session and will be charged with the fee during fall semester. With the prior permission of the Senior Warden, the resident students can use air coolers during summer session. They will be charged an additional amount of Rs. 1200/- per room per session.The charges for room heaters are payable for winter session and will be charged with the fee during fall semester.

38.9   **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 Endowment Fund.

38.10   **Refund of Securities**
The university security, library security, hostel security and mess security are refunded when a student leaves the university or the hostel (in case of mess security) after deduction of outstanding dues of the university, library, or the hostel respectively. The university security, however, shall stand forfeited if a student withdraws from or leaves the university before completing the first year.

38.11   **Non-payment of Fee and Charges**
A fine of Rs.10.00 per day will be charged for a period of 10 days after the last date fixed for payment of fees and charges. After that, the name of the defaulter will be struck off the rolls of the university and he / she will have to pay the re-admission fee along with the fees and fine before he is re- admitted. Application to this effect shall be submitted to the concerned Dean of Faculty. However, a student who receives scholarship through the university Treasurer may pay his / her fee and charges without fine within a week of receipt of the scholarship for the corresponding period.

CHAKWAL CAMPUS
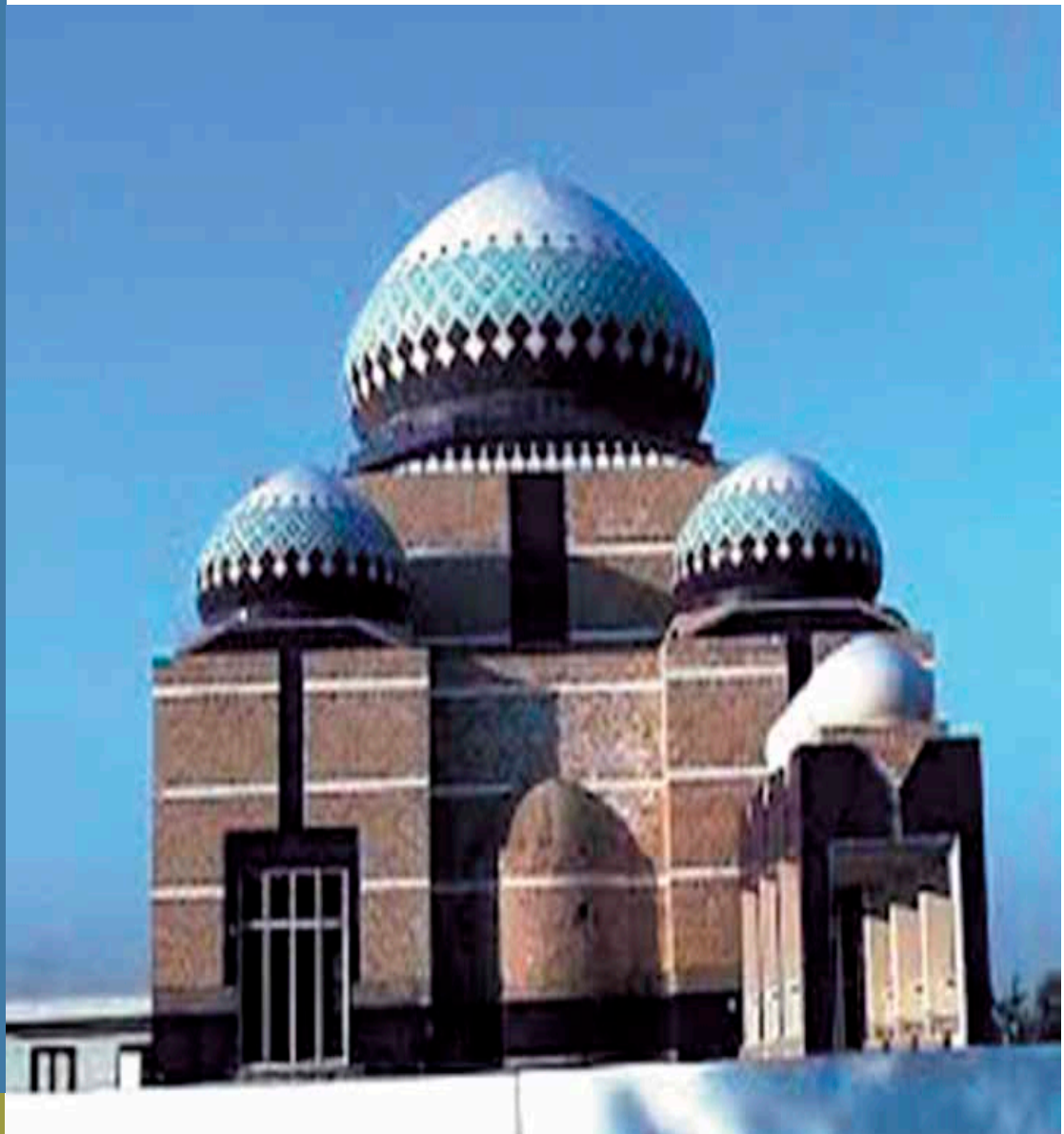
CHAKWAL CAMPUS
UET TAXILA

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Campus Director

Prof. Dr. Aftab Ahmad

PhD (UET, Taxila)

The Chakwal City

The city was founded during the era of Mughal emperor Zaheer-ud-Din Babar. Alexander the great also passed through this region in 326 B.C. One of the Muslim Scientists Al-Beruni came to this valley and stayed here for some time. During his stay at Katas, he not only learned Sanskrit but also performed various geographic experiments and successfully measured the radius of earth. Chakwal district is rich in natural resources such as coal, limestone, gypsum, salt, petroleum and other valuable minerals. Three cement plants with total production capacity of 24000 tons per day are already operational. Some textile factories and oil exploration companies are also working in the surrounding area.

The Sub-Campus Chakwal

Almost thirty years after the establishment of the main campus, first campus of UET Taxila at Chakwal started functioning in the year 2005. So far, nine sessions have been enrolled in Electronic and Mechatronics engineering. Annual intake in each discipline is 50.

Location

The Sub-campus is situated in the heart of the Chakwal city in old Kachehri complex on Talagang road, Chakwal is located 110 Km south-east of the capital city of Islamabad in the Dhanni region of the Pothohar Plateau. The Chakwal campus can easily be approached by either of the two exits on the Motorway M2. i.e., Balkassar and Kallar Kahar. The main campus is under construction near the Balkasaar Interchange.

Administration

The Campus Director under the supervision of Vice-Chancellor UET Taxila is the administrative and academic head of the Sub-Campus Chakwal. The overall management policy guidance is provided by the University Syndicate. The various academic and administrative bodies delineated in the UET's charter, function actively. The normal academic procedures and administrative rules of the UET Taxila are followed in the Sub- Campus Chakwal.

Academic Programes

The sub-Campus Chakwal of UET Taxila offers four years under graduate programs in Electronic Engineering and Mechatronics Engineering . The Engineering Programs are accredited by Pakistan Engineering Council (PEC).

Future Plan

The Sub-Campus Chakwal has planned to establish three more departments in the second phase with the help of Punjab Govt. / Higher Education Commission.

Hostel Facility

At present, Hostel facility is NOT available at the sub-campus Chakwal. Students applying for admission at Chakwal Campus must keep in mind that they have to arrange for their residence at their own in Chakwal City.

Rules and Regulations

In general, all the rules and regulations mentioned for the main campus (UET Taxila) in the prospectus are applicable for Sub- Campus Chakwal.

Contact Numbers

Campus Director:	054-3602004
Director Office:	054-3602003
Chairman Mechatronics:	054-3540625
Chairman Electronic:	054-3551278

DEPARTMENT OF ELECTRONIC ENGINEERING

Electronic Engineering is one of the major fields in industry. It finds vast range of applications. At sub campus Chakwal, we offer BSc. degree in Electronic Engineering. The Department has twelve full time Faculty members and around 200 Students enrolled. Five batches of Department have passed out and the program is PEC accredited. We have well equipped laboratories of Electronics, Computer, System, Embedded Systems, Communication Systems and Circuits & Measurements. The Department has established Industrial Linkages to Support its students for their Projects, Internships and Jobs.

Laboratories

Electronics Lab

(Lab Director Engr. Ahmad Umar Niazi)

Electronics Lab is one of the major Labs in the department. The lab is equipped with Power Electronics Trainers and Test Equipment including Function Generators, Power Supplies, Oscilloscopes and DC Power Supplies. The scope of the Lab includes subjects like Basic Electronic Engineering, Electronic Circuit Design, Integrated Electronics, Power Electronics and other related courses.

Circuits and Measurements Lab

(Lab Director Engr. Khawaja Shafiq Haider)

The lab provides practical work facilities for courses of Circuit Analysis-I, Circuit Analysis-II, Instrumentation and Measurement, Industrial Electronics and other related courses. The lab includes state of the art equipment to support the subjects.

Embedded Systems Lab

(Lab Director Engr. Muhammad Kamran Javed)

The Laboratory covers the Courses like FPGA- Based System Design, Digital Logic Design, Microprocessors and Microcontrollers and other related subjects. The lab includes Xilinx based FPGAs, Microcontroller trainers of PIC and 8051, Texas DSP kits and other test equipment.

Computer Lab

(Lab Director Engr. Furqan Shaukat)

The lab has latest computers to support all courses requiring computer simulations including Programming Fundamentals, Object-Oriented Programming, Computer Aided Engineering Design, Computer Communication Networks and other related courses.

Communication Systems Lab
(Lab Director Engr. Muhammad Usman)

The lab is equipped with Antenna Trainers, Communication Trainers, Transmission Line Trainer, Spectrum Analyzer and other test equipment. The lab supports courses like Analog and Digital Communications, Antenna and Wave Propagation, Micro Wave Engineering and other related courses.

Project Lab

(Lab Director Engr. Faisal Masood)

The lab is equipped with Computers and related facilities. This lab support students to develop their projects.

ASIC Design and DSP Lab*
(Lab. Director: Engr. Kamran Javed)

The objective of ASIC & DSP Lab. is to cover the areas of Advanced Digital Design and Signal & image Processing. This Laboratory is used for practical hands-on training of FPGA-Based Design, Digital Signal Processing (DSP), Digital Image Processing, Digital Design and other courese. The advance equipments of Texas instruments, Analog Devices, Xilinx and National instrument are available in the laboratory.

Electrical Machines Lab*
(Lab. Director: Engr. Faisal Masood)

The objective of Electrical Machines Lab. is to cover the area of Electrical Machines and Transformers. This Laboratory is used for practical hands-on training of Electrical Machines. The electrical machines available in this lab are, Asynchronous Machines, Synchronous Machines, DC Machines and Transformers. These are covered in detail by explaining the objectives, discussing electrical diagrams, giving brief overview of the theory and associated formulae for a thorough understanding and summarization of the results, for subsequent analysis and discussion.

*These Labs are being set-up.

Faculty
Chairman
Dr. Aftab Ahmad

Professor
Dr. Aftab Ahmad
PhD (UET, Taxila)

Assistant Professors
Dr. Yasir Arafat Durrani
PhD (Polytechnic University of Madrid, Spain)

Dr. Tariq Mehmood
PhD (QAU, Islamabad)

Engr. Ahmad Umar Niazi
MSc Engg (UET Taxila)

Engr. Furqan Shaukat
MSc Engg (UET, Taxila)

Engr. Hammad Zakki
MSc Engg (UET, Taxila)

Engr. Muhammad Usman
MSc Engg (UET Taxila)

Engr. Khawaja Shafiq Haider
MSc Engg (NUST, Islamabad)

Engr. Muhammad Abdul Basit
MSc UET Taxila (abroad for higher studies)

Engr. Akhtar Rasool
MSc Engg (DU, Sweden) (aboard for higher studies)

Engr. M. Laiq Ur Rahman Shahid
MSc Engg UET Taxila (abroad for higher studies)

Lecturers
Engr. Faisal Masud
MSc Engg (UET, Taxila)

Engr. Haq Nawaz
MSc Engg UET Taxila (abroad for higher studies)

Engr. Sadaqat Ali
MSc Engg (UET, Taxila)

Lab Engineers
Engr. Safia Bibi
BSc Engg (UET, Taxila)

Engr. Muhammad Usman Zahid
BSc Engg (BUITMS Quetta)

Engr. Muhammad Kamran Javed
MSc Engg (UET, Taxila)

Engr. Muhammad Tahir Khan
MSc Engg (HITEC, Taxila)

Courses of Study for Undergraduate Program
BSc Electronic Engineering

1st Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE- 111	Circuit Analysis-I	2	1
CS- 112	Programming Fundamentals	3	1
BH-113	Applied Physics	3	0
BH-114	Calculus and Analytical Geometry	3	0
BH-115	Pak Studies	2	0
BH-116	Functional English	3	0
		16	**02**
	Total	**18**	

2nd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-121	Basic Electronic Engineering	3	1
EE-122	Digital Logic Design	3	1
CS-123	Object Oriented Programming	3	1
BH-124	Differential Equations	3	0
BH-125	Linear Algebra	3	0
		15	**03**
	Total	**18**	

3rd Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-211	Circuit Analysis-II	3	1
EE-212	Electronic Circuit Design	3	1
CS-213	Digital Systems	3	1
CS-214	Engineering Drawing	0	1
BH-215	Complex Variables and Transforms	3	0
BH-216	Islamic Studies	2	0
		14	**04**
	Total	**18**	

4th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-221	Electrical Machines	3	1
EE-222	Electromagnetic Field Theory	3	0
EE-223	Microprocessor And Microcontrollers	3	1
EE-224	Signal and Systems	3	0
BH-225	Understanding Psychology and Human Behavior	3	0
		15	**02**
	Total	**17**	

5th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-311	Instrumentation and Measurements	3	1
EE-312	Integrated Electronics	3	1
EE-313	Control Systems	3	1
EE-314	Probability And Random Variables	3	0
BH-315	Technical Writing	2	0
BH-316	**Chemistry/Biology**	**3**	**0**
		17	**03**
	Total	**20**	

6th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-321	Digital Signal Processing	3	1
EE-322	Analog And Digital Communication Systems	3	1
EE-323	Power Electronics	3	1
BH-324	Numerical Analysis	3	0
BH-325	Communication skills	3	0
		15	**03**
	Total	**18**	

7th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-411	Elective-I	3	1
EE-412	Elective-II	3	0/1
EE-413A	Electronic Engineering Project	0	3
ME/MT-414	IDEE	3	0
MS-415	Entrepreneurship	3	0
		12	**4-5**
	Total	**16-17**	

8th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
EE-421	Elective-III	3	1
EE-422	Elective-IV	3	0/1
EE-413B	Electronic Engineering Project	0	3
MS-424	Engineering Economics and Management	3	0
		09	**04**
	Total	**13**	
	Grand Total	**138**	

Abbreviations used:

BH: Basic Sciences & Humanities
EE: Electronic Engineering
CS: Computer Sciences
MS: Management Sciences

Ratio of Engineering to non Engineering Subjects:

Engineering Subjects:	27	65%
Non Engineering Subjects:	15	35%
Total Subjects:	42	

Ratio of Engineering to non Engineering Credit hours

Engineering Credit hours:	96	70%
Non Engineering Credit hours:	42	30%
Total Credit hours:	138	

List of Elective Courses

- EE-4XX   Microelectronic Technology
- EE-4XX   Opto-Electronics
- EE-4XX   Digital Instrumentation Systems
- EE-4XX   Industrial Electronics
- CS- 4XX   Advanced Objected-Oriented Programming
- EE-4XX   VLSI Design
- EE-4XX   Microwave Engineering
- EE-4XX   Wave Propagation and Antennas
- EE-4XX   Navigational Aids
- EE-4XX   FPGA-Based Systems Design
- EE-4XX   Digital Control Systems
- EE-4XX   Digital System Design
- EE/CS-4XX   Computer Communication Networks
- EE/CS-4XX   Artificial Intelligence
- EE-4XX   Biomedical Instrumentation
- EE-4XX   Laser and Fiber Optics
- EE-4XX   Mobile Communications
- EE-4XX   Satellite Communications
- EE/CS-4XX   Introduction to Neural Networks
- EE/CS-4XX   Fuzzy Logic and Simulation
- EE-4XX   Advanced Communication Systems
- EE-4XX   Optical Communication Systems
- EE/CS-4XX   Digital Image Processing
- EE/CS-4XX   Pattern Recognition and Matching
- EE-4XX   Embedded System Design
- EE-4XX   Advance Topics in Electronics
- EE-4XX   Filter Design
- EE-4XX   Medical Imaging

List of Interdisciplinary Engineering Electives (IDEE)

- MT-4XX   Introduction to Robotics
- MT-4XX   Mechatronics Applications
- ME-4XX   Thermodynamics
- MT-4XX   Mechanics of Materials
- ME-4XX   Theory & Design of Machines
- ME-4XX   Engineering Dynamics
- MT-4XX   Materials & Manufacturing Processes

Note:

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.

DEPARTMENT OF
MECHATRONICS ENGINEERING

Mechatronics is the synergistic combination of precision mechanical engineering, electronic control and systems thinking in the design of products and manufacturing processes. To meet the quality and productivity demands, industries are compelled to use sophisticated electromechanical systems. Mechatronics Engineering caters the national needs of industries in the field of Robotics, Automated Manufacturing Equipment, Automobiles, Security Systems, Treatment Plants and Medical Equipments, etc.

Laboratories

Computer and Simulation Lab.

(Lab Director: Engr. Bushra Nawaz)

Modeling and simulation is an integral part of Mechatronics design approach. This lab offers computer facilities that can be used by students for developing model of real systems and testing of these systems by simulation . The laboratory has latest computers to support the courses like Computer Programming, Computer Aided Design (CAD), Numerical Methods, Modeling and Simulation , Artificial Intelligence and Image Processing."

Robotics and Automation Lab.

(Lab Director: Engr. Shahbaz Ahmad)

Automation plays a key role in the moderen production industries. Industrial Robots, CNC Machines, Programable Logic Controllers (PLC's) are important constituents of mordern manfacturing system. This lab addresses the needs of Mechatronics Engineers. Here, students get hands on experience on PLC's , industrial Robots and CNC Machines. The lab equipment includes SCARA Robot, Gryphon Robot, CNC Machines, PLC and Pneumatic Trainer. The lab has resources for conducting experiments for the subjects of Robotics and Industrial Automation.

Mechanics Lab.
(Lab Director: Engr. Mubbashar Mehmood)

This lab enables students to test their mechanics concepts. Mechanics is very important for motion controlled systems like Robots and CNC Machines. By performing experiments on equipment present in lab students can test their porjects for statics and dynamics. The lab equipments include basic roof truss, creep test apparatus, torsion of shaft apparatus, screw jack, derrick crane force and moment kit,worm and shaft wheel apparatus, stepped shaft apparatus and friction on inclined plane appratus. Hook's law apparatus simple moment, appratus being reaction, apparatus shear apparatus. The lab equipment includes Universal Testing Machine, Impact Testing Machine, Hardness Testing Machine, Creep Testing Machine, Torsion Shaft Apparatus and Beam Reaction Apparatus. The lab is well equipped for conducting experiments of Mechanics of Materials subject.

Instrumentation and Control Lab.
(Lab Director: Engr. Ahmed Zaidi)

Instrumentation and Control engineering are crucial areas of Mechatronics Engineering. Sensors availaility is not that common in Pakistan and students generally struggle to buy many types of sensors. This lab is equipped with interactive sensor kits which help in developing concepts related to general working of control systems. Also, servomechanisms can be used to verify control system's

concepts. The lab covers courses like Instrumentation and Measurments, Control Sytems and Advanced Control Systems. The lab is equipped with Sensor Transducer Kits, Magnetic Levitation system, Servo Mechanism Bridges, and Actuators.

Workshop (Lab Director: Engr. Hafiz Khurram Ali)
This lab enables students to fabricate different jobs used in their projects. Fabrication, furnishing, welding, grinding and other operations can be done here. The lab also provides an idea about conventional machining to press, weld and soldrer diffrent matrerials. All hand tools required for the practical work in Smithy Shop, Fitting Shop, Electrical, PCB work Shop and Carpentry Shop are avaiable here. The laboratory covers the scope of courses like Workshop Practice and Machine Tools and Manufacturing Processes. Students use this facility while working on their final year projects.

Mechatornics System Design Lab

(Lab Director: Engr. Muhammad Asif)
This lab offers equipment and facilities that can be used for student projects. This lab provides conducive environment to students working on their final year projects. The lab is equipped with Computers, Oscilloscopes, Power Supplies, Function Generators, PIC Training Kits, 8051 Training Kits, Digital Multimeters, Soldering Stations, Bread Boards, Motors, Various ICs and work benches which provide the students solid platform to construct their projects.

Faculty

Chairman
Dr. Amir Sultan

Professor
Dr. Muhammad Shahid Khalil
PhD Engg (Sheffield, UK) , PGD(HRM), PGD(Quality)

Assistant Professors
Dr. Amir Sultan
MSc Engg (Sheffield, UK)
PhD Engg (UET Taxila)

Engr. Hafiz Muhammad Khurram Ali
MSc Engg (UET Taxila)

Engr. Shahid Mehmood
MSc Engg (UET Taxila)

Engr. Abdul Mannan
MSc Engg (UET Lahore) (abroad for higher studies)

Engr. Muhammad Khuram Saleem
MSc Engg (UET Lahore) (abroad for higher studies)

Engr. Ahmed Nouman
MSc Engg (UET Lahore) (abroad for higher studies)

Engr. Irfan Azhar
MSc Engg (UET Taxila) (abroad for higher studies)

Engr. Javed Akhter
MSc Engg (UET Lahore)

Dr. Shafiq Ur Rahman
PhD (IIUI, Islamabad)

Lecturers
Engr. Muhammad Asif
BSc Engg (UET, Taxila)
MSc Engg (UET, Lahore)

Engr. Bushra Nawaz
BSc Engg (UET, Taxila)
MSc Engg (UET Taxila)

Engr. Mubbashar Mehmood
BSc Engg (UET, Taxila)
MSc Engg (UET Taxila)

Engr. Najam ul Hassan Shah
BSc Engg (UET, Lahore)

Lab Engineers
Engr. Shahbaz Ahmad
BSc Engg (UET Taxila)
MSc Engg (UET Taxila) In Progress

Engr. Ahmed Zaidi
BSc Engg (UET Taxila)
MSc Engg (COMSAT)

Engr. Arqam Razzaq
BSc Engg (UET, Taxila)
MSc Engg (UET Lahore) In Progress

Shared Faculty

Professors
Dr. Shahab Khushnood
Dr. Riffat Asim Pasha
Engr. Sagheer Ahmed

Assistant Professors
Dr. Haroon Yousaf
Dr. Salman Hussain
Dr. Muhamamd Ali
Dr. Awais Azam
Dr. Mustansar Ali Ghazanfar
Engr. Zahid Suleman Butt
Engr. Muhammad Kashif Iqbal

Courses of Study for Undergraduate Program
BSc Mechatronics Engineering

1st Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
GS-111	Calculus and Analytic Geometry	3	0
HS-112	Communication Skills	3	1
GS-113	Applied Physics	3	0
MT-114	Workshop Practice	0	1
ET-115	Electric Circuits and Network Analysis	3	1
HS-116	Islamic Studies	2	0
	Total	**14**	**3**
	Semester Total for Part-I & II	**17**	

2nd Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
GS-121	ODEs and Linear Algebra	3	0
MT-122	Engineering Statics	2	1
MT-123	Engineering Drawing and CAD	0	2
CS-124	Computer Programming - I	1	1
HS-125	Technical Report Writing	3	0
HS-126	Pakistan Studies	2	0
	Total	**11**	**4**
	Semester Total for Part-I & II	**15**	
	Total for 1st Year	**32**	

3rd Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
GS-211	Vector Calculus	3	0
ET-212	Electronic Devices and Circuits	2	1
MT-213	Engineering Dynamics	2	1
MT-214	Materials and Manufacturing Processes	3	0
CS-215	Computer Programming-II	0	1
CS-216	Digital Logic Design	2	1
	Total	**12**	**4**
	Semester Total for Part-I & II	**16**	

4th Semester			
Course No.	**Course Title**	**Credit Hours**	
		Part I	**Part II**
GS-221	Complex Variables and Transforms	3	0
ET-222	Electronic Circuit Design	3	1
HS-223	Social Sciences Elective	3	0
MT-224	Mechanics of Materials	2	1
MT-225	Thermodynamics	2	1
MT-226	Electromechanical Systems	3	1
	Total	**16**	**4**
	Semester Total for Part-I & II	**20**	
	Total for 2nd year	**36**	

5th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
GS-311	Numerical Methods	2	1
MT-312	Microcontroller Based Design	2	2
MT-313	Theory of Machines	2	1
MT-314	Fluid Mechanics, Hydraulics and Pneumatics	3	1
MT-315	Transducers and Instrumentation	3	1
MT-316	Mechanical Vibrations	2	0
	Total	**14**	**6**
	Semester Total for Part-I & II	**20**	

6th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
GS-321	Probability and Statistics	3	0
MT-322	Control Systems	3	1
MT-323	Mechatronics System Design	2	2
MT-324	Design of Machine Elements and CAD/CAM	2	1
ET-325	Power Electronics	3	1
MS-326	Engineering Economics	2	0
	Total	**15**	**5**
	Semester Total for Part-I & II	**20**	
	Total for 3rd year	**40**	

7th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
MT-411	Robotics	3	1
MT-412	Industrial Automation	2	1
MT-413	Engineering Elective-I	3	1
MS-414	Management Sciences Elective	3	0
MT-415-A	Mechatronics Engineering Project	0	3
	Total	**11**	**6**
	Semester Total for Part-I & II	**17**	

8th Semester

Course No.	Course Title	Credit Hours	
		Part I	Part II
MT-421	Heat Transfer	2	1
MT-422	Engineering Elective-II	3	1
MT-415-B	Mechatronics Engineering Project	0	3
	Total	**5**	**5**
	Semester Total	**10**	
	Total Courses	**43**	
	Total Credit Hours	**135**	

List of Elective Courses

Social Sciences Elective (3+0)

- Professional Ethics
- Sociology and Development
- Organizational Behaviour
- Or any other relevant course (s)

Management Sciences Elective (3+0)

- Engineering Management
- Entrepreneurship, Leadership and Team Management
- Principles of Management
- Research Methodology
- Production Management
- Or any other relevant course (s)

Engineering Electives-I (3+1)

- Modeling and Simulation
- Filter Design and Digital Signal Processing
- Artificial Intelligence
- Embedded Systems
- Or any other relevant course (s)

Engineering Electives-II (3+1)

- Machine Vision
- Digital Control
- Advanced Control Systems
- Neuro-Fuzzy Control
- Special Topics in Mechatronics
- Machine Learning
- Digital Image Processing
- Or any other relevant course (s)

TENTITIVE ADMISSION SCHEDULE FOR UNDERGRADUATE ADMISSION–ENTRY 2015 — 40

Internet submission of Entry Test Form	06-July-2015
Entry Test (centralized)	16-Aug-2015
Availability of Undergraduate Prospectus + Admission Form	07-Sep-2015
Last Date of Submission of Admission Form	30-Sep-2015
Hifz-e-Quran Test	01-Oct-2015
1st Merit List on the website	02-Oct-2015
Last Date of Depositing Dues and Original Documents for 1st Merit List	09-Oct-2015
2nd Merit List on the website	12-Oct-2015
Last Date of Depositing Dues and Original Documents for 2nd Merit List	16-Oct-2015
3rd Merit List on the website	19-Oct-2015
Last Date of Depositing Dues and Original Documents for 3rd Merit List	22-Oct-2015
Issuance of Registration No. to admitted students	02-Nov-2015
Start of 1st Semester Classes	03-Nov-2015
Admission Closed	30-Nov-2015

ADMISSION COMMITTEE UNDERGRADUATE- ENTRY 2015 — 41

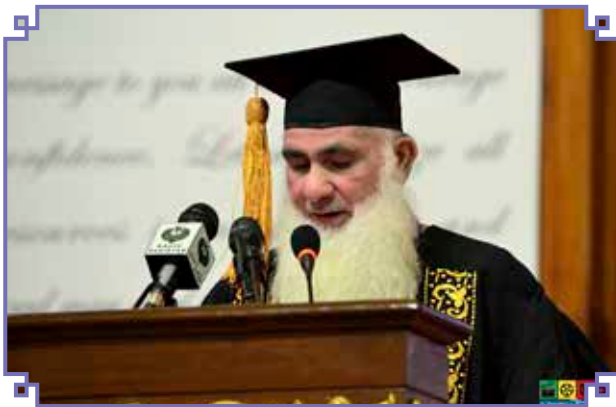|	
Prof. Dr. Khawaja Sajid Bashir, MED (Convener)	051-9047412
Engr. Muhammad Kashif Iqbal, (Dy. Convener) (Assistant Professor, MED	051-9047687

Members

Engr. Mansoor A. Baluch (Registrar)	051-9047406
Mr. Israr Ul Haq (Treasurer)	051-9047414
Dr. Khalid Bashir Bajwa , Assistant Professor ,TED	051-9047575
Dr. Nadeem Majeed Choudhary, SED	051-9047740
Engr. Rasikh Habib , Lecturer, Environmental Engg.	051-9047809
Dr. Malik Intisar Ali Sajjad , Lecturer, EED	051-9047548

Admission Office Staff

Mr. Muhammad Asghar Mehmood	
Mr. Abdul Waheed	051-9047412
Mr. Waqas Mehmood	
Hafiz Muhammad Shahid	

Important Note:

- *This schedule is TENTATIVE and it may change depending upon the date of declaration of F.Sc (Part-II) result by the respective boards. The prospective students are advised to visit the admission schedule on admissions.uettaxila.edu.pk for updates.*

- No application shall be entertained after the last date.
- The selected candidates in a merit list must join the University within specified time limit as per requiremnets laid down under clause 37. If they fail to do so, their names would be excluded from any future merit lists and their admission would be cancelled.
- No call letters shall be posted to selected candidates.
- The detailed lists can be viewed at the official website of the university at: admissions.uettaxila.edu.pk
- The display of metit lists shall continue till the admission is closed. So keep visiting the University Web site for further merit lists (if any).

UNIVERSITY OF ENGINEERING AND TECHNOLOGY TAXILA, PAKISTAN

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MEDIA CLUB
UET TAXILA

Design:
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