



University of Engineering and Technology, Taxila

UNDERGRADUATE PROSPECTUS
2018



www.uettaxila.edu.pk

Disclaimer

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





Vision

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

Mission Statement

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

Principles of Governance

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

ORGANIZATIONAL SETUP

Chancellor

Ch. Muhammad Sarwar
(Governor of the Punjab)

Pro-Chancellor

Yasir Humayun Sarfraz
(Minister for Higher Education, Punjab)

Vice Chancellor



Vice Chancellor's Note

Engineering is about solving problems, about designing processes and making products to improve the quality of human life. From reservoirs to robots, aircraft to bionic arms, microchips to mobile phones - engineers design and manufacture a huge variety of objects that can make a real difference to both individuals and to societies.

The role of higher education and higher education institutions is pivotal for promotion and sustenance of knowledge economy. We, at University of Engineering & Technology Taxila, are not only aware of our role as an academic institution but also committed to serve the society and economy by creating and imparting cutting-edge knowledge in the field of Engineering & Technology. We have adopted a student-centric approach and have set clear goals by keeping in view the standards of 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 also started new programs and opened a sub-campus in Chakwal. In addition to this second sub campus will be established soon in Pind Daden Khan

It is pertinent to mention here that for increasing enrollment, we never ever compromise merit. We recruit the Best & Brightest students and ensure to provide them a quality learning environment. We have heavily invested to establish new and state of the art infrastructure in form of labs, new classrooms, new building, fast and reliable internet access throughout the campus, new hostels, and a huge collection of books in the library. 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 to the needy students. Last year 18% of our students received financial assistance as a result of these scholarships.

I consider Engineering a combination of science, art, and craft. We are also making linkages with industry and trying to fully capitalize the industrial hubs of Taxila and Hattar. In order to learn the craft of engineering, we encourage and facilitate our students to get an 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 contributing in solving problems of the local industry. We have recently added new courses in 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.



CONTENTS

Introduction	i
Academic Heads	iii
Establishment and Services	v
Heads of Non Teaching Departments	vii
Important Telephone Numbers	viii
Academic Programs	x
Code of Ethics	xi
Profile of the University Faculties	1
1. Faculty of Civil and Environmental Engineering	2
• Department of Civil Engineering	
• Department of Environmental Engineering	
2. Faculty of Electronics and Electrical Engineering	17
• Department of Electrical Engineering	
• Department of Electronic Engineering	
3. Faculty of Mechanical and Aeronautical Engineering	34
• Department of Mechanical Engineering	
4. Faculty of Industrial Engineering	43
• Department of Industrial Engineering	
5. Faculty of Telecommunication and Information Engineering	50
• Department of Computer Engineering	
• Department of Software Engineering	
• Department of Telecommunication Engineering	
• Department of Computer Science	
6. Faculty of Basic Sciences and Humanities	80
• Department of Basic Sciences	
Services and Common Facilities	83
7. Library	84
8. Network Administration and Research Centre	88
9. Directorate of Advanced Studies, Research and Tech. Development	89
10. Directorate of Students Affairs	90
11. Directorate of Sports	90
12. Halls of Residences	91
13. Estate Office	91
14. Transport	91
15. Dues/Scholarship Section	92

16.	Health Facilities	92
17.	Admission/Registration Office	93
18.	Placement Office	93
19.	Planning and Development Cell	95
20.	Quality Enhancement Cell	95
Rules and Regulations		97
21.	Teaching and Examination	98
22.	Migration	110
23.	Students Discipline Rules	111
24.	University Hostels	115
25.	Allotment of Rooms in Hostels	117
26.	University Dress Code	118
27.	Miscellaneous	118
Admission Procedures		119
28.	General Instructions	120
29.	Eligibility for Admission	120
30.	Seats Allocation Chart	123
31.	Categories and Symbols	124
32.	Determination of Merit	127
33.	Merit Position Entry-2017	129
34.	Domicile Requirements	130
35.	Documents to be attached with Form (F-I)	130
36.	How to Complete the Application Form (F-I)	131
37.	Procedure for the Selected Candidates	132
38.	Fees and Other Charges	133
Sub Campus Chakwal		135
39.	Introduction	136
	• Department of Electronics Engineering	
	• Department of Mechatronics Engineering	
40.	Admission Schedule	151
41.	Admission Committee	151
Important Notice: Admission Policy		152



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 twin cities of Islamabad and Rawalpindi on the main Rawalpindi-Peshawar highway. The University buses commute daily between the campus and the cities of Islamabad, Rawalpindi and Wah Cantt. The campus covers an area of 163 acres. All the teaching departments, residential colony for teachers/ employees, student hostels, guest house, post office and bank are housed on campus.



Deans of Faculties

Faculty of Civil and Environmental Engineering	Vacant
Faculty of Electronic and Electrical Engineering	Prof. Dr. Tahir Nadeem Malik
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. Mirza Jahanzaib
Faculty of Basic Sciences and Humanities	Prof. Dr. Mirza Jahanzaib

Chairmen of Academic Departments

Department of Civil Engineering	Prof. Dr. Hashim Nisar Hashmi
Department of Environmental Engineering	Prof. Dr. Liaqat Ali Qureshi
Department of Electrical Engineering	Prof. Dr. Aftab Ahmad
Department of Electronic Engineering	Dr. Yaseer Arafat Durrani



Department of Mechanical Engineering	Prof. Dr. Riffat Asim Pasha
Department of Energy Engineering	Dr. Muzafar Ali
Department of Computer Engineering	Prof. Dr. Hafiz Adnan Habib
Department of Software Engineering	Dr. Tabassam Nawaz
Department of Telecommunication Engineering	Prof. Dr. Yasar Amin
Department of Computer Science	Dr. Aun Irtaza
Department of Industrial Engineering	Dr. Waseem Ahmed
Department of Basic Sciences	Dr. Muhammad Mudassar

Sub Campus Chakwal

Director Chakwal Campus	Prof. Dr. Amir Sultan
Chairman Department of Electronic Engineering	Dr. Abdul Basit
Chairman Department of Mechatronics Engineering	Prof. Dr. Amir Sultan



ESTABLISHMENT AND SERVICES

Registrar

Engr. Mansoor Ahmad Baluch
(on higher studies abroad)

Additional Registrars

Academic & Regulation Mr. Ali Hussain Naqvi
Dues & Scholarships Mr. Muhammad Ilyas Khan

Deputy Registrar

Establishment/ Affiliation/ Transport Mr. Khalid Mehmood

Assistant Registrar

Establishment Mr. Ahsan Ahmad
Public Information Officer Engr. Mansoor A. Baluch

Vice-Chancellor's Office

Secretary to Vice Chancellor Syed Basharat Abbas Shah

Deputy Directors

Placement P & D Security Engr. Ijaz Ahmad
Ms. Amna Arshad
Major (R) Jahangir Khan

Treasurer Mr. Ali Hussain Naqvi

Deputy Treasurers

Accounts Mr. Muhammad Nawaz
Mr. Shahid Saleem
Audit Cell Mr. Abid Mehmood Qureshi
Resident Auditor Mr. Abdur Rauf

Examinations Branch

Controller Mr. M. Azhar Naeem Kamboh
Deputy Controllers Engr. Zakauallah
Mr. Rana Nadeem Anjum
Mr. Ahmad Noor

Building and Works

Project Director Engr. Muhammad Tahir Ali
XEN Engr. Ch. Nisar Ahmad
SDO Engr. Nasreen Ali

Estate Office

Resident Officer/ Estate Officer Engr. Muhammad Tahir Ali

Health Clinic

SMO (Male) Dr. M. Arif Nadeem
SMO (Female) Dr. Sabahat Qudus
Medical Officer Dr. Abu Obaida
Dental Surgeon Dr. Uzma Masood

Library

Deputy Chief Librarian Mr. M. Mushtaq Khan
Senior Librarian Mr. Malik M. Safdar
Mr. Muhammad Bashir

Sports

Director Physical Education Mr. M. Akmal Hussain

QEC

Director Engr. Comdr. (R) Mubashir Nawaz, TI
Data Analyst Mr. Faisal Shahzad

NARC

Web Manager Engr. Ulfat Hussain

Legal Cell

Legal Advisor Adv. Mr. Farhat Abbas Ch.

Chairmen of Committees

Masjid Prof. Dr. Muhammad Iram Baig
Discipline Prof. Dr. Tahir Nadeem Malik
Affiliation Prof. Dr. Mirza Jahanzeb
Library Prof. Dr. Tahir Mahmood
Sports Dr. Obaidullah
Transport Engr. Zahid Suleman Butt

Hostels

Senior warden Prof. Dr. Hafiz Adnan Habib

Foreign Faculty Hostel Dr. Nazeer Ahmad Anjum

Halls of Residence

Warden (Male)

1. Dr. Obaidullah (Q-Hall)
2. Dr. Faheem Butt (I-Hall)
3. Dr. Tanzeel-ur-Rashid (Umar and Usman-Hall)
4. Mr. Akmal Hussain (Ali-Hall)
5. Dr. Nazeer Ahmad Anjum (AB-Hall)
6. Dr. Muhammad Haroon Yousaf (JBH-Hall)

Warden (Female)

1. Mrs. Afshan Asim (Ayesha-Hall)

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

1. Engr. Faisal Shehzad
2. Engr. Muhammad Abdul Rehman

Resident Tutors - Iqbal (I) Hall

1. Dr. Muhammad Nadeem Majeed
2. Engr. Wasif Tabbasum

Resident Tutor - Umar & Usman Hall

1. Engr. Muhammad Talha Amir

Resident Tutor - Ali Hall

1. Engr. Hamaad Haider

Resident Tutors - Abu Bakar (AB) Hall

1. Engr. Muhammad Irshad Yehya
2. Engr. Shahwar Ali khan

Resident Tutors - Jabir Bin Hayan (JBH) Hall

1. Engr. Muhammad Usman Rashid
2. Engr. Muhammad Zeeshan

Resident Tutors - Ali Hall

1. Engr. Mubashir Ayub
2. Engr. Zaheer Abbas

Resident Tutors - Ayesha Hall

1. Engr. Nayab Zahra

Day Care Center

Warden

Engr. Syeda Iffat Naqvi

Resident Tutors

Engr. Saima Zareen

Dr. Uzma Masood



HEADS OF NON TEACHING DEPARTMENTS

Director Student Affairs

Prof. Dr. Aftab Ahmad

Director ASR & TD

Prof. Dr. Muhammad Yaqub

Director Information Technology Centre /Networks

Mr. Khuram Mehmood

Director Telephone Exchange

Engr. Ghulam Shabbir

Director Digital Library

Dr. Nadeem Majeed Choudhary

Director ORIC

Engr. Ijaz Ahmad

In-charge Scholarships

Dr. Muhammad Ali Nasir

Director Academics

Engr. Comdr. (R) Mubashir Nawaz, TI

Director Social Entrepreneurship

Dr. Waseem Ahmad

Director Staff Development

Dr. Muzaffar Ali

Director International Linkages

Engr. Ijaz Ahmad

Director Procurement

Mr. Muhammad Gul Aziz Awan

Director P&D

Prof. Dr. Imran Hafeez

Chief Editor Technical Journal

Prof. Dr. Hafiz Adnan Habib



IMPORTANT TELEPHONE NUMBERS

Trunk Numbers: 9047 (RWP/IBD PRI port #) 400, 500, 600 (Operator Extensions), Fax No: 051-9047420
The Intercom extensions are configured as Rawalpindi/Islamabad.

	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	845
Industrial Engineering	827
Telecommunication Engineering	918
Basic Sciences	870
Other Establishments	
Registrar	405
Deputy Registrar (Establishment)	407
Assistant Registrar (Establishment)	408
Establishment Branch	409
Additional Registrar Academic & Regulation	410
Academic & Regulation Branch	411
Admissions Office (Undergraduate)	412
Treasurer	413

	Intercom Ext. (ddd)
Accounts Branch	417
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 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	568
Quaid-e-Azam Hall	264,269
Iqbal Hall	266,271
Ali Hall	267,272
Abubakar Hall	265,270
Usman Hall	273,277
Ayesha Hall	268,274
Director Telephone Exchange	907
Convener Admission Committee	427



ACADEMIC PROGRAMS

The University offers B.Sc. Degree courses in following programs:

1. Civil Engineering
2. Computer Engineering,
3. Electrical Engineering
4. Mechanical Engineering
5. Software Engineering
6. Telecommunication Engineering
7. Environmental Engineering
8. Electronic Engineering
9. Industrial Engineering
10. Computer Science
11. Mechatronics Engineering*
12. Electronics Engineering*

*Sub Campus Chakwal

Existing Faculties and 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 & Aeronautical Engineering

- Department of Aeronautical Engineering

Faculty of Industrial Engineering

- Department of Engineering Economic & Management

Faculty of Civil and Environmental Engineering

- Department of Architecture

CODE OF ETHICS

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, maliciously, directly or indirectly, the reputation or employment of another engineer, nor shall you fail to act equitably while performing professional duty.
- You shall use your knowledge and skill of engineering for human welfare, and render professional service and advance, which reflects your best professional service and advance, which reflects your best professional judgment.
- You shall not abuse your position or power, nor accept illegal gratification of any sort.
- You shall faithfully observe and fulfill all your obligations.
- You shall express your opinion on engineering or other matters in a frank, open and straight forward manner.
- You shall not criticize another engineer's work without his knowledge nor malign, or injure his 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.

PROFILE OF UNIVERSITY FACULTIES





Dean

Prof. Dr.

This faculty consists of two degree awarding departments:

- Department of Civil Engineering
- Department of Environmental Engineering

DEPARTMENT OF CIVIL ENGINEERING

Chairman

Prof. Dr. Hashim Nisar Hashmi

Professors

Dr. Hashim Nisar Hashmi

BSc Engg (Hons) (Gold Medalist) (UET Lahore)
PhD (Queen's Univ. UK)

Dr. Qaiser uz Zaman Khan

BSc Engg (Hons) (Gold Medalist) (UET Lahore)
MSc Engg (University of Leeds UK)
PhD (Saitama University Japan)

Dr. Liaqat Ali Qureshi

BSc Engg (UET Lahore)
MSc Engg (UET Taxila), PhD (UET Taxila)

Dr. Muhammad Yaqub

BSc Engg (UET Taxila), MSc Engg (UET Taxila),
PhD (University of Manchester UK)

Dr. Ayub Elahi

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

Dr. Imran Hafeez

BSc Engg (UET Lahore), MSc Engg (UET Taxila),
PhD (UET Taxila), Post Doc (USA)

Dr. Usman Ghani

BSc Engg (Hons., Gold Medalist, UET Taxila)
MSc Engg (UET Taxila)
PhD (UET Taxila & Queen Mary Univ. UK)
Post Doc (Univ. of Birmingham UK)

Dr. Naeem Ejaz

BSc Engg (UET Taxila)
MSc Engg (UET Lahore), PhD (UET Taxila)

Associate Professors**Dr. Usman Ali Naeem**

BSc Engg (UET Taxila), MSc Engg (UET Taxila)
PhD (UET Taxila)

Dr. Jawad Hussain

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (The Univ. of Auckland NZ)

Dr. Muhammad Fiaz Tahir

BSc Engg (UET Taxila)
MSc Engg (UET Lahore)
PhD (UET Taxila)

Dr. Naveed Ahmad

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (Univ. of Nottingham UK)

Dr. Faisal Shabbir

BSc Engg (Hons., UET Taxila),
MSc Engg (UET Taxila)
PhD (The Univ. of Auckland NZ)

Assistant Professors**Engr. Muhammad Salman**

BSc Engg (UET Taxila)
MSc Engg (NUST)

Dr. Faheem Butt

BSc Engg (UET Lahore), MSc Engg (UET Taxila)
PhD (The Univ. of Auckland NZ)

Dr. Shahzad Saleem

BSc Engg (Hons., UET Taxila)
MSc Engg (UET Taxila)
PhD (Thammasat Univ. Thailand)

Dr. Syed Bilal Ahmed Zaidi

BSc Engg (Hons., UET Taxila)
M.Sc. Engg (UET Taxila)
PhD (University of Nottingham UK)

Engr. Muhammad Usman Arshid

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Mehwish Asad

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Saqib Mehboob

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Muhammad Saad

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Dr. Naveed Ahmad

BSc Engg (Hons., UET Taxila)
MSc Engg (UET Taxila)
PhD (Tokyo University)

Dr. Afaq Ahmad

BSc Engg (Hons., UET Taxila)
MSc Engg (UET Taxila)
PhD (Heriot-watt University UK)

Dr. Irshad Qureshi

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
M. Engg (AIT Thailand)
PhD (AIT Thailand)

Dr. Ghufran Ahmad Pasha

BSc Engg (Hons., UET Taxila)
MSc Engg (UET Taxila)
PhD (Saitama University Japan)

Lecturers**Engr. Muhammad Rameez Sohail**

BSc Engg (MP Risalpur), MSc Engg (NUST)

Engr. Afzal Ahmed

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Usman Muhammad

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Zulfiqar Ali

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Kashif Riaz

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Rana Muhammad Waqas

BSc Engg (Hons., UET Taxila)

MSc Engg (UET Taxila)

Engr. Jamal Ahmed Khan

BSc Engg (CECOS Peshawar)

MSc Engg (NUST Islamabad)

Engr. Muhammad Talha Amir

BSc Engg (Hons., UET Taxila)

MSc Engg (UET Taxila)

Engr. Hammad Raza

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

Lab Engineers

Engr. Usman Rashid

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

Engr. Muhammad Arshad

BSc Engg (NUST)

Engr. Zahra Bashir Malik

BSc Engg (Hons., UET Taxila)

Engr. Hammad Haider

BSc Engg (UET Lahore)

Engr. Mujahid Iqbal

BSc Engg (UET Taxila)



The Department

Department of Civil Engineering is actively engaged in disseminating civil engineering education for the last forty years. The Department has produced several eminent engineers who have made significant contributions in the planning and execution of Civil Engineering projects in Pakistan as well as abroad. The Department of Civil Engineering has an approved faculty strength of 52 (including lab engineers), nearly 60% of whom contribute to postgraduate teaching and are involved in PhD research work. Approximately 684 undergraduate and 171 postgraduate (MSc Engg) 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.

**New trends in Engineering Education
Outcome Based Education (OBE)**

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

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



Mission of Program

To fulfill the needs of the society by producing responsible civil engineers equipped with sound knowledge, highest moral values, and communication skills.

Program Educational Objectives (PEOs)

- PEO-1:** Effective role towards engineering profession based on their technical knowledge and skills.
- PEO-2:** Planning, design and management of civil engineering projects through professional growth and development activities.
- PEO-3:** Effective communication skills and teamwork to contribute in multi-disciplinary projects.
- PEO-4:** Zeal for continuous learning and societal services in context of social, environmental and ethical aspects

Courses of Study

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

In the bachelor's course, emphasis is laid on the fundamental concepts and principles, which inbuilt the basis of civil engineering practice. To foster their creative abilities, the students are assigned projects on design, construction or laboratory investigation for self directed execution. The classroom and laboratory work 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 laboratories to meet the academic requirements of students and teachers as well as the professional needs of the government and private organizations:

- a. Soil Mechanics
- b. Concrete Technology
- c. Strength of Materials
- d. Transportation Engineering
- e. Hydraulics and Irrigation Engineering
- f. Structural Engineering
- g. Surveying
- h. Environmental Analytical Techniques Lab
- i. CAD laboratory
- j. Postgraduate Research Laboratory

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

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

Taxila Institute of Transportation Engineering (TITE)

Department of Civil Engineering has established a new institute by the name of "Taxila Institute of Transportation Engineering (TITE)". It is a unique institute of its own kind in Pakistan and has proved to be a focal point for providing education and research facilities in the field of Transportation Engineering. The institute provides facilities like research laboratories, lecture rooms for postgraduate students, conference room, computer laboratory and a library. A wide range of state of the art equipment had been procured to facilitate high tech research work. The mission of the institute is to develop and implement innovative methods, materials, and the technologies for improving transportation efficiency, safety and reliability as well as improving the learning and innovative environment for students, faculty and staff in transportation related areas.

Postgraduate Studies & Research

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, Transportation Engineering, and Geo-Tech Engineering covering the most recent developments. The courses contain a balance of analytical and professional aspects and are designed to suit the needs of fresh graduates and those with professional experience.

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

Most of the postgraduate students belong to the construction industry and act as a bridge for



university–industry linkage that makes research in the department to be practical and useful for the country. The introduction of PhD program has further enriched the research activities in the department. Twenty-Two students have been awarded PhD degrees in various fields. Presently about 69 PhD scholars are pursuing their PhD research work. Research is being carried out in the following areas:

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

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

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-101	Engineering Drawing	1	2
CE-102	Engineering Mechanics	2	1
CE-103	Engineering Geology	2	1
CE-104	Surveying-I	2	2
MA-105	Mathematics-I	3	0
	Total:	10	6
	Semester Total	16	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-106	Surveying-II	2	2
CE-107	Engineering Materials	2	1
CE-108	Professional Ethics	2	0
MA-109	Mathematics-II	3	0
HU-110	Pakistan Studies	2	0
CE-111	Professional English	2	0
	Total:	13	3
	Semester Total	16	
	Total for 1st Year	32	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-201	Fluid Mechanics-I	2	1
CE-202	Properties of Concrete	2	1
CE-203	Engineering Practice	2	1
MA-204	Numerical Analysis and Computer Programming	2	1
HU-205	Islamic Studies	2	0
CE-212	Hazards and Disaster Management	3	0
	Total:	13	4
	Semester Total	17	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
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	2	1
HU-210	Computer Applications	2	1
CE-211	Communication Skills & Technical Report Writing	1	1
	Total:	12	6
	Semester Total	18	
	Total for 2nd Year	35	

Semester - V

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

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-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	1
	Total:	11	5
	Semester Total	16	
	Total for 3rd Year	34	



Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
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	3
	Total:	11	8
	Semester Total	19	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-407	Structural Engineering	2	1
CE-408	Irrigation Engineering	2	1
CE-409	Design of Structures	2	2
CE-410	Computer Aided Design	1	2
CE-406(B)	Project	0	3
	Total:	7	9
	Semester Total	16	
	Total for Final Year	35	
	Grand Total for Four Years	136	





DEPARTMENT OF ENVIRONMENTAL ENGINEERING

Chairman

Prof. Dr. Liaqat Ali Qureshi

Assistant Professors

Engr. Sidra Iftikhar

BSc Environmental Engg (UET Lahore)
MSc Environmental Engg (UET Lahore)
(on higher studies abroad)

Dr. Sadia Nasreen

MSc Environmental Chemistry (FJWU Rwp)
MS Environmental Sciences
(COMSATS Abbotabad)
PhD Environmental Engg (China)

Engr. Shamas Tabraiz

BSc Environmental Engg (UET Lahore)
MSc Environmental Engg (UET Lahore)
(on higher studies abroad)

Lecturers

Engr. Rasikh Habib

BSc Environmental Engg (NUST Islamabad)
MSc Environmental Engg (NUST Islamabad)

Engr. Sadia Fida

BSc Environmental Engg (UET Lahore)
MSc Environmental Engg (UET Lahore)

Engr. Muhammad Zeeshan

BSc Environmental Engg (UET Lahore)
MSc Environmental Engg (UET Lahore)

Engr. Babar Abbass

BSc Environmental Engg (NUST Islamabad)
MSc Environmental Engg (NUST Islamabad)

Engr. Abaid Ullah

BSc Environmental Engg (Hons) (UET Taxila)
MSc Engg Management
(UET Taxila) (Gold Medalist)

Engr. Bilal Asif

BSc Environmental Engg (JET Taxila)

Lab Engineers

Engr. Aasma Imam Khan

BSc Environmental Engg (JET Taxila)

Engr. Nayaab Zahra

BSc Environmental Engg (JET Lahore)

MSc Environmental Engg (JET Lahore)

Engr. Muhammad Usman Saleem

BSc Environmental Engg (JET Taxila)

Shared Faculty

Dr. Muhammad Shahid Khalil

(Professor, MED)

Dr. Syed Bilal Ahmad Zaidi

(Assistant Professor, CED)

Engr. Syed Saqib Mehboob

(Assistant Professor, CED)

Engr. Zulfiqar Ali

(Lecturer, CED)

Engr. Muhammad Arshad

(Lab Engineer, CED)

Engr. Jamal Ahmad

(Lecturer, CED)

Engr. Mansoor Ashraf

(Lecturer, EED)

The Department

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

The department is equipped with laboratories including Environmental Analytical Techniques Lab, Environmental Microbiology Lab. Water Treatment Technology Lab. Air & Noise Pollution Control Lab. Environmental Chemistry Lab and Advanced Analytical Lab which cater for the experimental and project works.

The department employs highly qualified faculty with diverse backgrounds and research interests.

Program Mission

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

Program Educational Objectives (PEOs)

Graduates will:

PEO-1: Apply acquired knowledge for design and operation of environmental systems, and related infrastructural facilities.

PEO-2: Exercise ethical, social and professional practices while making engineering decisions.

PEO-3: Remain committed towards continued learning process.

Courses of Study

The Department of Environmental Engineering offers full time 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:

- Health Safety and Environment
- Environmental Engineering Lab. Techniques
- Geo-Graphical information Systems
- Water Supply and Sewerage Network Design
- Environmental Management Systems
- Membrane Based Treatment Technologies
- Solid & Industrial Waste Management
- Air & Noise Pollution Control
- Environmental Impact Assessment and Management
- Water & Waste water Treatment and Design

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

Semester - I

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

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CE-121	Engineering Mechanics	2	1
CE-122	Surveying and Leveling	2	2
BH-123	Introduction to Microbiology	3	0
BH-124	Linear Algebra and Differential Equations	3	0
BH-125	Communication Skills	2	0
EE-126	Electrical Technology	2	0
	Total	14	3
	Semester Total	17	
	Total for 1st Year	35	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-211	Environmental Microbiology	2	1
CE-212	Strength of Materials	2	1
CE-213	Soil Mechanics	2	0
BH-214	Environment and Human Interaction	2	0
BH-215	Numerical Analysis	3	0
BH-216	Pakistan Studies	2	0
	Total	13	3
	Semester Total	16	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-221	Environmental Engineering Lab. Techniques	1	2
EN-222	Environmental Ecology	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	5
	Semester Total	18	
	Total for 2nd Year	34	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
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	Environmental Management System	3	0
CE-316	Project Planning and Management	2	0
	Total	14	4
	Semester Total	18	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-321	Water Treatment and Design	3	1
EN-322	Engineering Economics	2	0
EN-323	Environmental Impact Assessment and Management	3	0
EN-324	EN-324 Solid Waste Management	3	1
EN-325	Air & Noise Pollution Control	3	0
BH-326	Technical Report Writing	2	2
	Total	16	2
	Semester Total	18	
	Total for 3rd Year	36	

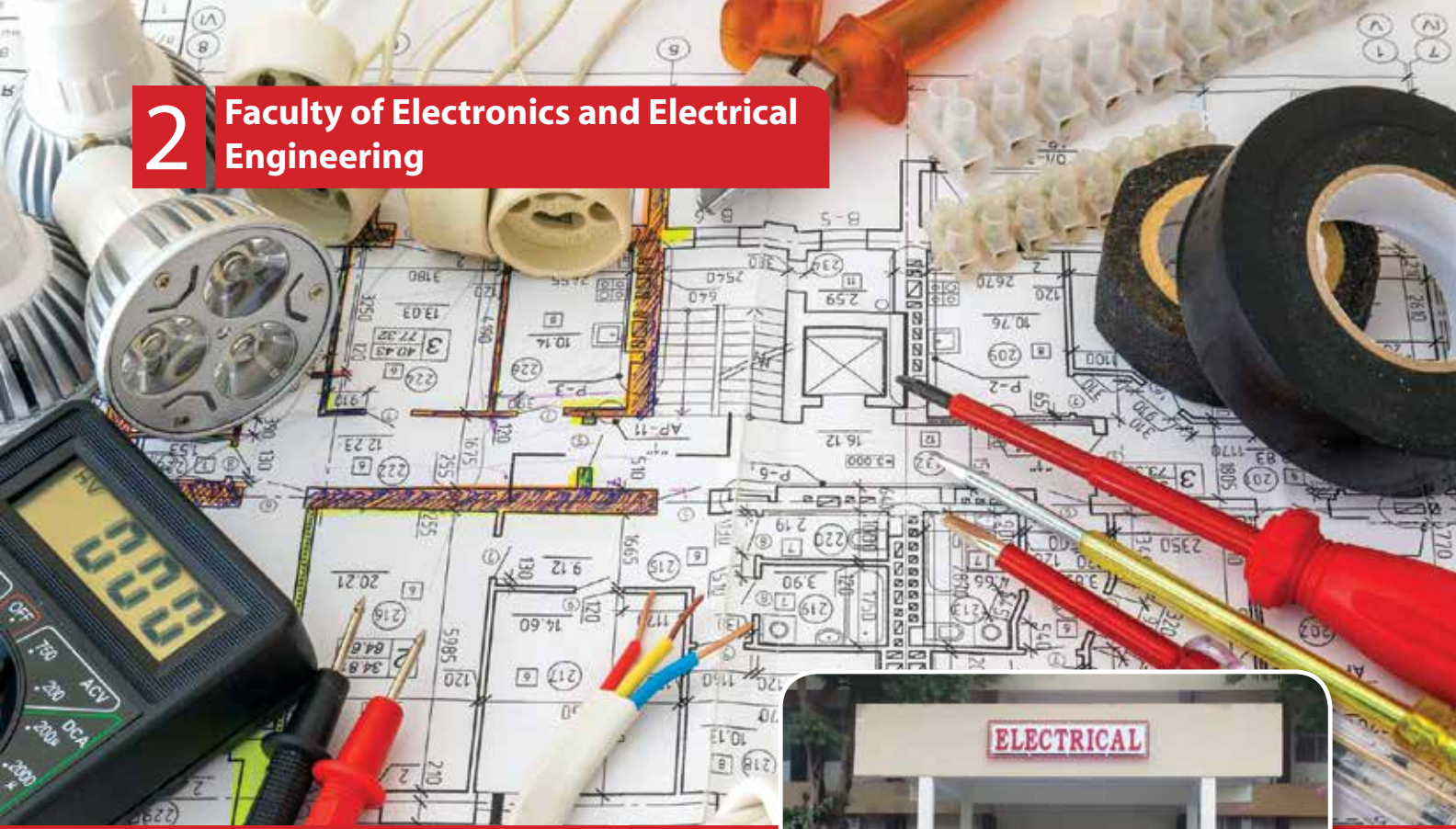
Semester - VII

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

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EN-421	Industrial Waste Management	3	0
MS-422	Entrepreneurship	2	0
EN-423	Renewable Energy Resources	3	0
EN-424	Membrane Based Treatment Technologies	2	0
EN-425	Final Year Project -II	0	3
	Total	10	3
	Semester Total	13	
	Total for 4th Year	31	
	Grand Total for Four Years	136	





Dean

Prof. Dr. Tahir Nadeem Malik

This faculty consists of two degree awarding departments:

- Department of Electrical Engineering
- Department of Electronic Engineering

DEPARTMENT OF ELECTRICAL ENGINEERING

Chairman

Prof. Dr. Aftab Ahmad

Professors

Dr. Ahmad Khalil Khan

BSc Engg (UET Lahore)
MSc Engg (USA), PhD (UET Taxila)

Dr. Tahir Nadeem Malik

BSc Engg (UET Lahore)
MSc Engg (UET Lahore), PhD (UET Taxila)

Dr. Aftab Ahmad

BSc Engg (UET Lahore)
MSc Engg (UET Lahore), PhD (UET Taxila)

Dr. Muhammad Iram Baig

BSc Engg (UET Lahore)
MSc Engg (UET Lahore), PhD (UET Taxila)

Dr. Gulistan Raja

BSc Engg (UET Taxila)
MSc Engg (Osaka University Japan)
PhD (UET Taxila)

Dr. Tahir Mahmood

BSc Engg (Hons., UET Lahore)
MSc Engg (UET Lahore), PhD (UET Taxila)

Associate Professors

Dr. Salman Amin

BSc Engg (Hons., UET Taxila), MSc Engg (UET Taxila),
PhD (UET Taxila)

Dr. Sarmad Sohaib

BSc Engg (GIKI Topi)
PhD (Uni. of Manchester UK)

Dr. Muhammad Obaidullah

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (Uni. of Manchester UK)

Dr. Shabbir Majeed Chaudhry

BSc Engg (UET Taxila)
MSc Engg (UET Taxila), PhD (UET Taxila)

Dr. Shaikh Saaqib Haroon

BSc Engg (UET Lahore)
MSc Engg (UET Taxila)
PhD (UET Taxila)

Assistant Professors

Engr. Ilyas Ahmad

BSc Engg (UET Peshawar)
MSc Engg (UET Taxila)

Dr. Inam ul Hasan Shaikh

BSc Engg. (Hons., UET Lahore)
MSc Engg. (UET Taxila)
PhD (Uni. of Manchester UK)

Dr. Ing. Ahsan Ali

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (TUH Germany)

Dr. Hafiz M. Irfan Arshad

BSc Engg (UET Taxila), MSc Engg (UET Taxila)
PhD (UET Taxila) (on leave)

Dr. Intisar Ali Sajjad

BSc Engg (UET Lahore), MSc Engg (UET Taxila)
PhD (POLITO Italy)

Engr. Tahir Muhammad

BSc Engg (Ottawa Canada)
MSc Engg (UET Taxila), (on Higher Studies Abroad)

Dr. Junaid Mir

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (University of Surrey UK)

Engr. Ghulam Ali

BSc Engg (UET Taxila)
MSc Engg (NUST Islamabad)

Engr. M. Faisal Nadeem Khan

BSc Engg (AU Islamabad)
MSc Engg (UET Taxila)

Lecturers

Engr. Hammad Shaukat

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Mamoona Khalid

BSc Engg (Hons., UET Taxila)
MSc Engg (UET Taxila)
(on Higher Studies Abroad)

Engr. Munira Batool

BSc Engg (BZU Multan)
MSc Engg (UET Taxila), (on Higher Studies Abroad)

Engr. M. Mansoor Ashraf

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Mehroze Iqbal

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Abubakar Waqas

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Faisal Siddiq

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Nouman Qamar

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Tanveer Khursheed

BSc Engg (PU Lahore)
MSc Engg (UET Taxila)

Engr. Usama Ashfaq

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Hafiz Hammad Haider

BSc Engg (PIEAS Islamabad)

MSc Engg (UPB Germany)

Engr. Raja Umer Imtiaz

BSc Engg (ISU USA), MSc Engg (ISU USA)

Lab Engineers**Engr. Habib ur Rehman Habib**

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

(on Higher Studies Abroad)

Engr. Aleem Zahid

BSc Engg (CASE Islamabad)

MSc Engg (UET Taxila)

Engr. Farzana Kausar

BSc Engg (UET Taxila)

Engr. Komal Munir

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

Engr. Muhammad Waseem

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

Engr. Wasif Tabbassum

BSc Engg (IU Bahawalpur)

Engr. Hafiz Mehboob Riaz

BSc Engg (UET Lahore), MSc Engg (NUST Islamabad)

Engr. Zainab Shahid

BSc Engg (NUST Islamabad)

MSc Engg (NUST Islamabad)

Engr. Shuja Irfan

BSc Engg (UET Taxila)

**The Department****Mission**

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

Program Educational Objectives (PEOs)

PEO-1: The graduates will possess knowledge to analyze, design, investigate and solve complex engineering problem

PEO-2: The graduate will be able to serve and lead for socio-economic development of the country

PEO-3: The graduate will demonstrate lifelong attitude, entrepreneurial and soft skills with ethical values

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 150 undergraduate students are enrolled annually. The department has produced more than 2700 graduate students so far.

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

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

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

Laboratories and other Facilities

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

- Basic Electrical Engineering Lab
- Computer Lab
- Computer Simulation Lab
- Digital Systems Lab
- Electrical Machines Lab
- Electronics Lab
- Ind. IT: Control and Automation
Advance Control Lab
Basic Control Lab
- High Voltage Lab
- Instrumentation and Process Control Lab
- Microwave & Communication Lab
- Opto-Electronics Lab
- Power Systems Lab
- Power Electronics Lab
- Power Systems Simulation Lab
- Workshop & Projects Lab
- Virtual Reality 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 Registered Engineer (RE) status.

Postgraduate Studies & Research

The department started its postgraduate program in 1984 and doctoral study program in 2001. Until now 380 MSc and 27 PhDs have been produced. The postgraduate program offers a degree in “Master of Science in Electrical Engineering” with specializations in

- **Power**
- **Electronics**
- **Digital Techniques**
- **Control**

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 26% students are enrolled in full-time and 74% 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 are actively involved in research. The Department regularly arranges conferences, seminars and workshop in various areas of electrical engineering. The faculty members, postgraduate students and prominent researchers from Pakistan and abroad participate in these seminars. The department has a well-stocked and up to date library for use of the teachers and postgraduate students.

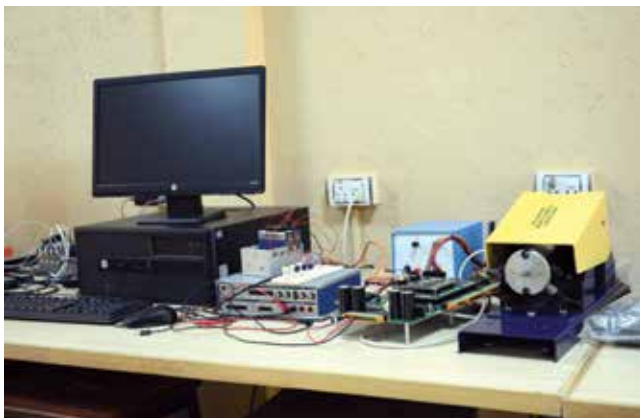
Courses Under Semester System BSc Electrical Engineering

Semester - I

Course Code	Course Title	Pre-requisite(s)	Credit Hours
EE-1113	Linear Circuit Analysis	Freshman Standing	3
EE-1111	Linear Circuit Analysis Lab	Co-requisite: Linear Circuit Analysis	1
EE-1121	Workshop Practice Lab	Freshman Standing	1
NS-1133	Applied Physics	Freshman Standing	3
NS-1131	Applied Physics Lab	Co-requisite: Applied Physics	1
NS-1143	Calculus & Analytical Geometry	Freshman Standing	3
HU-1152	Functional English	Freshman Standing	2
HU-1162	Islamic Studies	Freshman Standing	2
Total			16

Semester - II

Course Code	Course Title	Pre-requisite(s)	Credit Hours
EE-1213	Electronic Devices & Circuits	Freshman Standing	3
EE-1211	Electronic Devices & Circuits Lab	Co-requisite: Electronic Devices & Circuits	1
EE-1221	Engineering Drawing Lab	Freshman Standing	1
CS-1233	Programming Fundamentals	Freshman Standing	3
CS-1231	Programming Fundamentals Lab	Co-requisite: Programming Fundamentals	1
IDE-1243	Engineering Mechanics	Freshman Standing	3
IDE-1241	Engineering Mechanics Lab	Co-requisite: Engineering Mechanics	1
NS-1253	Differential Equations	Freshman Standing	3
HU-1262	Pakistan Studies	Freshman Standing	2
Total			18
Total for 1st Year			34



Semester - III

Course Code	Course Title	Pre-requisite(s)	Credit Hours
EE-2113	Electrical Machines	Linear Circuit Analysis	3
EE-2111	Electrical Machines Lab	Co-requisite: Electrical Machines	1
EE-2123	Digital Logic Design	Sophomore Standing	3
ES-2121	Digital Logic Design Lab	Co-requisite: Digital Logic Design	1
CS-2133	Computing Elective	Mentioned against the list of computing electives	3
CS-2131	Computing Elective Lab	Co-requisite: Same Computing Elective	1
NS-2143	Complex Variables & Transforms	Sophomore Standing	3
HU-2152	Communication Skills	Functional English	2
Total			17

Semester - IV

Course Code	Course Title	Pre-requisite(s)	Credit Hours
EE-2213	Electrical Network Analysis	Linear Circuit Analysis + Differential Equations + Complex Variables & Transforms	3
EE-2211	Electrical Network Analysis Lab	Co-requisite: Electrical Network Analysis	1
EE-2223	Microprocessors & Microcontrollers	Digital Logic Design + Programming Fundamentals	3
EE-2221	Microprocessors & Microcontrollers Lab	Co-requisite: Microprocessors & Microcontrollers	1
EE-2233	Signals & Systems	Complex Variables & Transforms	3
EE-2231	Signals & Systems Lab	Co-requisite: Signals & Systems	1
EE-2243	Probability Methods in Engineering	Calculus & Analytical Geometry	3
NS-2253	Linear Algebra	Sophomore Standing	3
Total			18
Total for 2nd Year			35



Semester - V

Course Code	Course Title	Pre-requisite(s)	Credit Hours
EE-3113	Linear Control Systems	Signals & Systems + Electrical Network Analysis	3
EE-3111	Linear Control Systems Lab	Co-requisite: Linear Control Systems	1
EE-3123	Electromagnetic Field Theory	Calculus & Analytical Geometry + Complex Variables & Transforms	3
IDE-3133	Applied Thermodynamics	Applied Physics	3
IDE-3131	Applied Thermodynamics Lab	Co-requisite: Applied Thermodynamics	1
NS-3143	Natural Science Elective	Mentioned against the list of natural science electives	3
HU-3153	Technical Report Writing	Communication Skills	3
Total			17

Semester - VI

Course Code	Course Title	Pre-requisite(s)	Credit Hours
EE-3213	Communication Systems	Signals & Systems + Probability Methods in Engineering	3
EE-3211	Communication Systems Lab	Co-requisite: Communication Systems	1
MS-3223	Management Science Elective I	Mentioned against the list of management science electives	3
HU-3233	Social Science Elective I	Mentioned against the list of social science electives	3
EE-32##3	Breadth Core I (Restricted Elective)	Mentioned against the list of specialization electives	3
EE-32##1	Breadth Core I Lab (Restricted Elective)	Co-requisite: Same Breadth Core I	1
EE-32##3	Breadth Core II (Restricted Elective)	Mentioned against the list of specialization electives	3
EE-32##1	Breadth Core II Lab (Restricted Elective)	Co-requisite: Same Breadth Core II	1
Total			18
Total for 3rd Year			35



Semester - VII

Course Code	Course Title	Pre-requisite(s)	Credit Hours
EE-4113	Design Project	Earned 92 credit hours or more	3
MS-4123	Management Science Elective II	Mentioned against the list of management science electives	3
HU-4133	Social Science Elective II	Mentioned against the list of social science electives	3
EE-41##3	Depth Elective I	Mentioned against the list of specialization electives	3
EE-41##1	Depth Elective I Lab	Co-requisite: Same Depth Elective I	1
EE-41##3	Depth Elective II	Mentioned against the list of specialization electives	3
EE-41##1	Depth Elective II Lab	Co-requisite: Same Depth Elective II	1
Total			17

Semester - VIII

Course Code	Course Title	Pre-requisite(s)	Credit Hours
EE-4213	Senior Design Project	Design Project + Technical Report Writing	3
EE-42##3	Depth Elective III	Mentioned against the list of specialization electives	3
EE-42##1	Depth Elective III Lab	Co-requisite: Same Depth Elective III	1
EE-42##3	Depth Elective IV	Mentioned against the list of specialization electives	3
EE-42##1	Depth Elective IV Lab	Co-requisite: Same Depth Elective IV	1
EE-42##3	Depth Elective V	Mentioned against the list of specialization electives	3
EE-42##1	Depth Elective V Lab	Co-requisite: Same Depth Elective V	0/1
Total			14/15
Total for Final Year			31/32
Grand Total for Four Years			135/136



Computing Electives

Course Title	Pre-requisite(s)
Data Structures & Algorithms	Programming Fundamentals
Machine Learning	Programming Fundamentals + Linear Algebra
Software Engineering	Programming Fundamentals
Databases	Data Structures & Algorithms
Artificial Intelligence	Data Structures & Algorithms
Mobile Application Development	Programming Fundamentals
Web Application Development	Programming Fundamentals
Network Security	Programming Fundamentals

Natural Science Electives

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

Management Science Electives

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

Social Science Electives

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

SPECIALIZATION ELECTIVES

Power

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

Communication

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

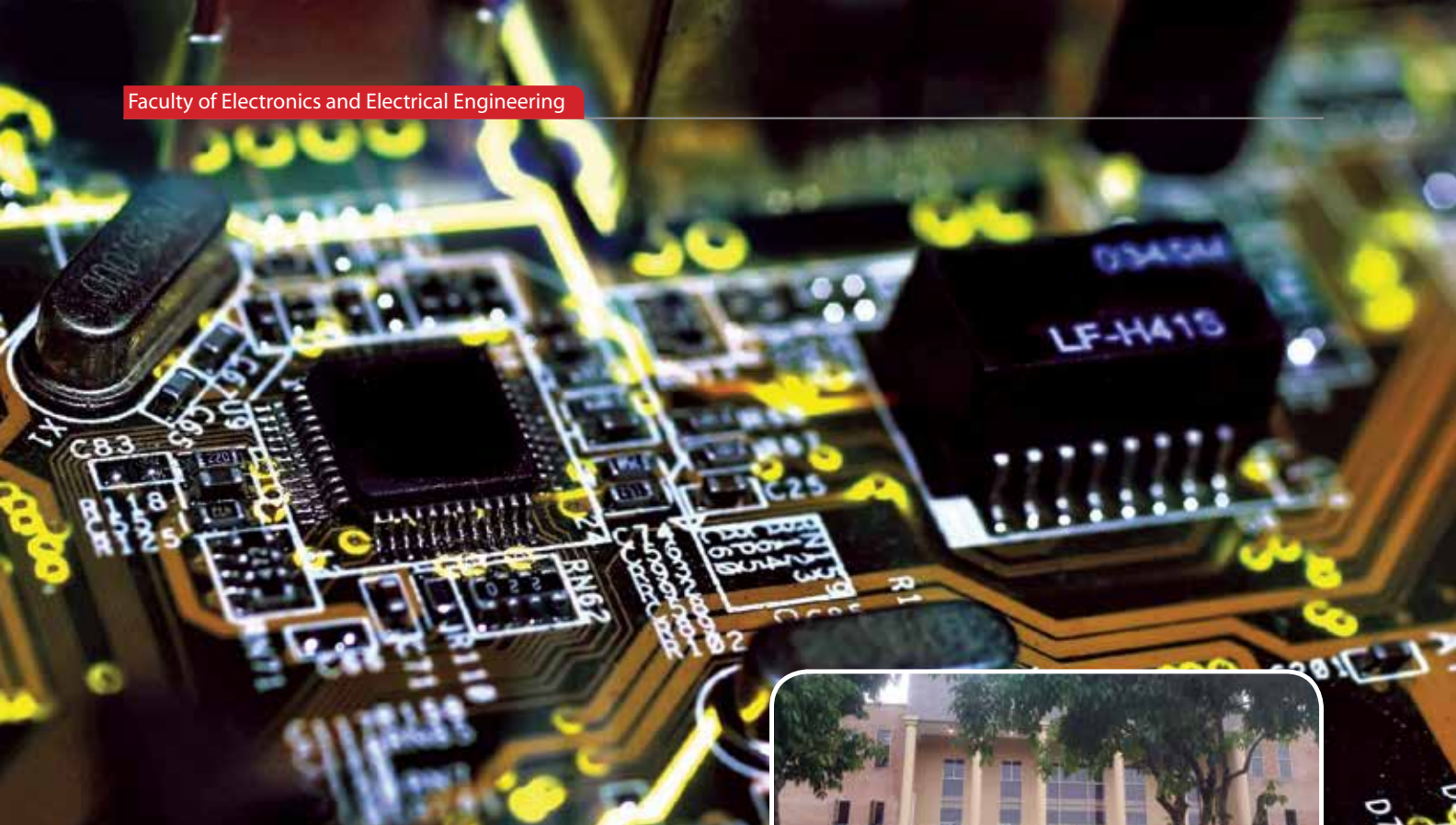
Electronics

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

Note:

- Choice of Electives in 7th and 8th semesters will be dependent on Elective chosen in 6th semester. No student can change the specialization area after choosing any of three areas above in his 6th Semester.
- 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

Dr. Yaseer Arafat Durrani

Associate Professor

Dr. Yaseer Arafat Durrani

BSc (Uni. of Peshawar)
BSc Engg (EMU Turkey)
MSc Engg (KTH Sweden)
PhD Engg (UPM Spain)

Assistant Professors

Dr. Syed Azhar Ali Zaidi

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (POLITO Italy)

Dr. Aamir Rashid

BSc Engg (UET Lahore)
MSc Engg (UNS France)
PhD Engg (INPT France)

Dr. Ing. Usman Masood

BSc Engg (UET Taxila)
MSc Engg (Uni. of Kassel Germany)
PhD Engg (UNi. of Kassel Germany)

Dr. Sajjad Hussain

BSc Engg (UET Taxila)
MSc Engg (Uni. of Liverpool UK)
PhD Engg (DCU Ireland)

Lecturers

Engr. Adil Usman

BSc Engg (AU Islamabad)
MSc Engg (AU Islamabad)

Engr. Syed Zohaib Hassan Naqvi

BSc Engg (IIU Islamabad)
MSc Engg (IIU Islamabad)

Engr. Muhammad Faraz

BSc Engg (IIU Islamabad)
MSc Engg (JET Taxila)
(on study leave)

Engr. Qummar Zaman

BSc Engg (IIU Islamabad)
MSc Engg (JET Taxila)
(on study leave)

Engr. Muhammad Atif Imtiaz

BSc Engg Engg (MAJU Islamabad)
MSc Engg (JET Taxila)

Lab Engineers**Engr. Muhammad Umar Khan**

BSc Engg (COMSATS)

Engr. Shujaat Hussain Shah

BSc Engg (JET Peshawar)

Engr. Hafiza Misbah Younis

BSc Engg (JET Taxila)

Engr. Sumair Aziz

BS Engg (IIU Islamabad)

The Department

The Department of Electronic Engineering was established in 2010 to fulfill the needs of the country by producing responsible graduates equipped with sound knowledge and skills along with highest moral values through conducive, learning environment. The Department offers a four years degree program in “Bachelor of Science in Electronic Engineering”. The students are provided with an educational foundation that prepares them to choose their carrier in Academic, Industrial or other areas.

The department was initially housed in the renovated historic building of the laboratory block (the first building of the campus constructed in 1977). Recently, the Department has been shifted to 2nd Floor of newly constructed Combined Ibne-Sina Academic Block to further strengthen its academic and research capacity. The current enrollment of the department is 40 undergraduate students per year.

Laboratories and other Facilities

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

- i. Basic Electronics Lab
- ii. Digital Electronics Lab
- iii. VLSI Design Lab
- iv. Microprocessors and Microcontrollers Lab
- v. Instrumentation and Control Lab
- vi. Digital Signal Processing & Communication Lab
- vii. Computer Lab
- viii. Project Lab

Courses of Study

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

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

- Electronics
- Computer
- Robotics
- Telecommunication
- Digital Signal Processing

Post Graduate Studies

The department has been mandated by the university to start its postgraduate program since 2014. It has an academic staff of 15, among those 11 faculty members are involved in postgraduate teaching and are involved in PhD research work. The department offers both MSc. and PhD. postgraduate programs recognized by the HEC with the following specializations:

- Electronics System Design
- Semiconductor Materials, Devices and Design
- Bio-Electronics

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

Program Educational Objectives (PEO's)

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

PEO-1: To produce graduates capable of developing creative solutions, analysis, and design of Electronic systems with their applications.

PEO-2: To produce graduates exhibiting leadership

with effective contribution towards the uplift of their profession and society through awareness about professional ethics.

PEO-3: To produce graduates who are willing to pursue continuous professional development for updating and expanding their knowledge base.



Courses Under Semester System

BSc Electronic Engineering

Semester - I

Course #	Course Title	Th.	Lab.	Pre-Requisites
BH-111	Functional English	3	0	
BH-112	Calculus & Analytical Geometry	3	0	
BH-113	Applied Physics	3	1	
CS-114	Computer Fundamentals & Programming	2	1	
EN-115	Linear Circuit Analysis	3	1	
EN-116	Electronics Workshop	0	1	
	Total	14	04	
	Semester Total	18		

Semester - II

Course #	Course Title	Th.	Lab.	Pre-Requisites
BH-121	Communication Skills	3	0	
BH-122	Linear Algebra	3	0	Calculus & Analytical Geometry
CS-123	Computer-Aided Engineering Design	0	1	
CS-124	Object Oriented Programming	3	1	Computer Fundamentals & Programming
EN-125	Solid-State Electronics	2	0	
EN-126	Electronic Devices & Circuits	3	1	Linear Circuit Analysis, Applied Physics
	Total	14	03	
	Semester Total	17		

Semester - III

Course #	Course Title	Th.	Lab.	Pre-Requisites
BH-211	Differential Equations	3	0	Calculus & Analytical Geometry
EN-212	Electronic Circuit Design	3	1	Electronic Devices & Circuits
EN-213	Digital Logic Design	3	1	
EN-214	Electrical Network Analysis	3	1	Linear Circuit Analysis
EN-215	Instrumentation & Measurements	3	1	Linear Circuit Analysis
	Total	15	04	
	Semester Total	19		

Semester - IV

Course #	Course Title	Th.	Lab.	Pre-Requisites
BH-221	Complex Variables & Transforms	3	0	Linear Algebra, Differential Equations
BH-222	Pakistan Studies	2	0	
EN-223	Microprocessors & Microcontrollers	3	1	Digital Logic Design
EN-224	Electrical Machines	3	1	Electrical Network Analysis
EN-225	Integrated Electronics	3	1	Electronic Circuit Design
	Total	14	03	
	Semester Total	17		

Semester - V

Course #	Course Title	Th.	Lab.	Pre-Requisites
BH-311	Social Sciences Elective I	3	0	
BH-312	Technical Report Writing & Presentation Skills	3	0	
EN-313	Probability & Random Variables	3	0	
EN-314	Electromagnetic Field Theory	3	0	Complex Variables & Transforms
BH-315	Signals & Systems	3	1	Electrical Network Analysis
	Total	15	01	
	Semester Total	16		

Semester - VI

Course #	Course Title	Th.	Lab.	Pre-Requisites
BH-321	Islamic Studies	2	0	
BH-322	Social Sciences Elective II	3	0	
EN-323	Analog & Digital Communication	3	1	Electronic Circuit Design, Signals & Systems
EN-324	Control Systems	3	1	Electrical Network Analysis, Signals & Systems
EN-325	Digital Signal Processing	3	1	Signals & Systems
	Total	14	03	
	Semester Total	17		

Semester - VII

Course #	Course Title	Th.	Lab.	Pre-Requisites
MS-411	Management Sciences Elective I	3	0	
EN-4XX	Elective-I	3	1	See list of Elective Courses
EN-4XX	Elective-II	3	0/1	See list of Elective Courses
XX-4XX	Elective-III	3	0/1	See list of Elective Courses
EN-499A	Electronic Engineering Project	0	3	
	Total	12	4/6	
	Semester Total	16/18		

Semester - VIII

Course #	Course Title	Th.	Lab.	Pre-Requisites
MS-421	Management Sciences Elective II	3	0	
EN-4XX	Elective-IV	3	1	See list of Elective Courses
EN-4xx	Elective-V	3	0/1	See list of Elective Courses
EN-499B	Electronic Engineering Project	0	3	
	Total	09	4/5	
	Semester Total	13/14		
	Grand Total for Four Years	133/136		

List of Elective Courses

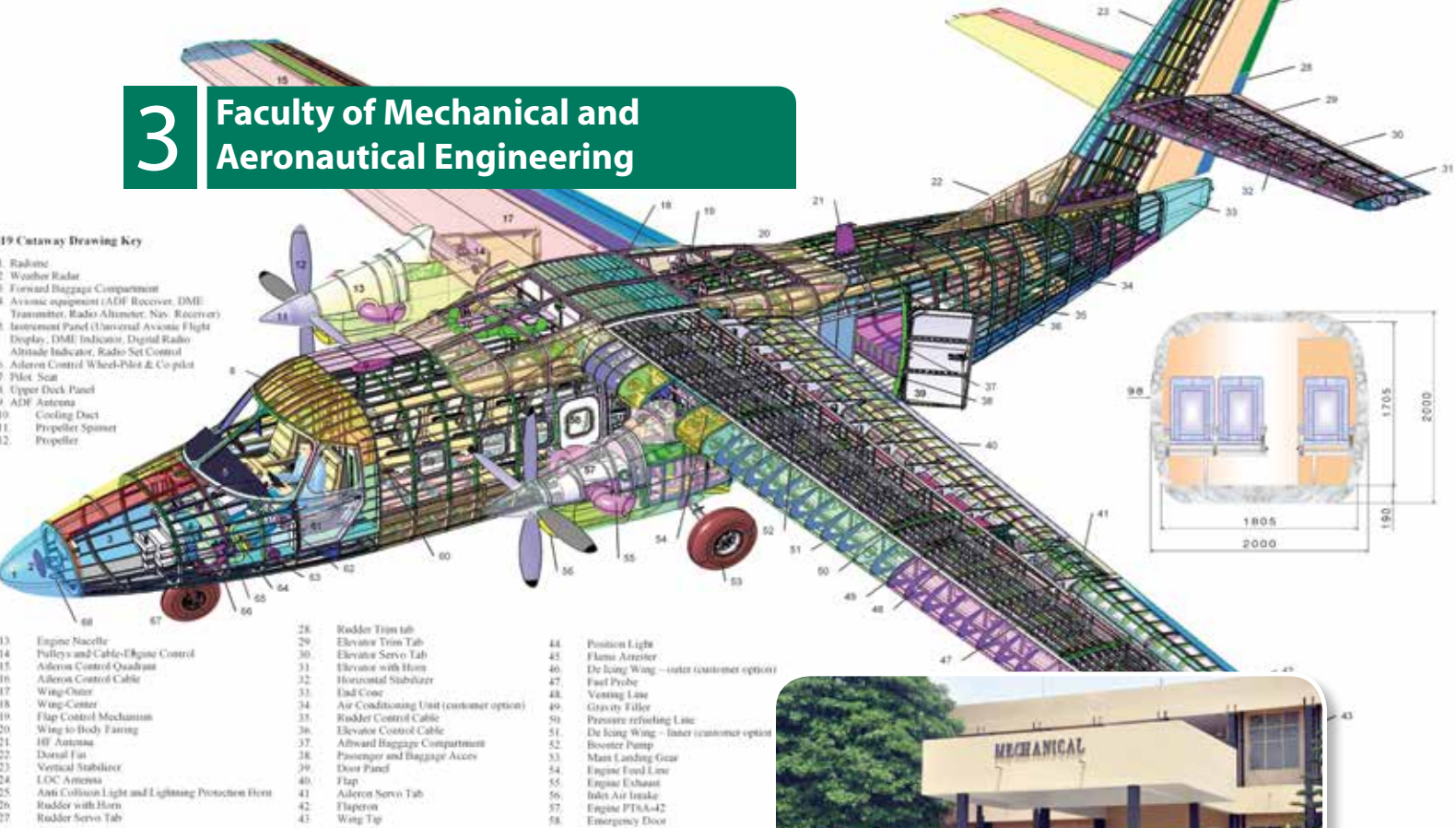
Course #	Course Title	Th.	Lab.	Pre-Requisites
EN-412	FPGA-Based System Design	3	1	Digital Logic Design
EN-413	Embedded System Design	3	1	Introduction to Computers, Digital Logic Design
EN-414	Industrial Automation	3	1	Instrumentation & Measurements, Control Systems
EN/CS-415	Digital Image Processing	3	1	Digital Signal Processing
EN-416	VLSI Design	3	1	Integrated Electronics
EN-417	Digital System Design	3	1	Digital Logic Design
EN-418	Analog & Mixed Signal Design	3	1	Integrated Electronics
EN-419	RF Electronics	3	0	Analog and Digital Communications, Integrated Electronics
EN-420	Microelectronic Technology	3	0	Integrated Electronics
EN-422	Power Electronics	3	1	Electronic Circuit Design
EN-423	Computer Architecture	3	0	Microprocessors and Microcontrollers
EN/CS-424	Computer Communication Networks	3	1	Analog and Digital Communications
EN-425	Digital Control Systems	3	1	Control Systems
EN-426	Industrial Electronics	3	1	Power Electronics
EN/CS-427	Artificial Intelligence	3	1	Digital Logic Design
EN-428	Filter Design	3	1	Digital Signal Processing

EN-429	Introduction to Nanotechnology	3	0	Solid-State Electronics, Integrated Electronics
EN-430	Biomedical Instrumentation	3	1	Instrumentation & Measurements
EN-431	Opto-Electronics	3	0	Applied Physics
EN-432	Laser and Fiber Optics	3	0	Applied Physics
EN-433	Digital Instrumentation Systems	3	1	Instrumentation & Measurements
EN-434	Mobile Communications	3	0	Analog and Digital Communications
EN-435	Satellite Communications	3	0	Analog and Digital Communications
EN-436	Microwave Engineering	3	0	Electromagnetic Field Theory
EN-437	Wave Propagation and Antennas	3	1	Electromagnetic Field Theory, Electrical Network Analysis
EN-438	Navigational Aids	3	1	
EN-439	Operating System Concepts	3	0	Introduction to Computers
EN/CS-440	Advanced Object Oriented Programming	3	1	Computer Programming
EN/CS-441	Introduction to Neural Networks	3	1	Microprocessors and Microcontrollers, Artificial Intelligence
EN/CS-442	Fuzzy Logic and simulation	3	0	Microprocessors and Microcontrollers, Artificial Intelligence
EN/CS-443	Pattern Recognition and Matching	3	0	Digital Signal Processing
BH-444	Numerical Methods	3	0	
EN/MT-445	Introduction to Robotics	3	0	Linear Algebra
EN/MT-446	Mechatronics Applications	3	0	
EN/MT-447	Thermodynamics	3	0	
EN/MT-448	Mechanics of Materials	3	0	
EN/MT-449	Theory & Design of Machines	3	0	Mechanics of Materials
EN/MT-450	Engineering Dynamics	3	0	
EN/MT-451	Materials & Manufacturing Processes	3	0	

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.

List of Social Sciences Elective Courses	
Course Title	Pre-Req.
Professional and Social Ethics	Nil
Sociology and Development	Nil
Social Anthropology	Nil
Understanding Psychology and Human Behaviour	Nil
Applied Psychology	Nil
Organizational Behaviour	Nil
Introduction to Sociology	Nil
Critical Thinking	Nil
Introduction to Philosophy	Nil

List of Management Sciences Elective Courses	
Course Title	Pre-Req.
Engineering Economics & Management	Nil
Engineering Project Management	Nil
Entrepreneurship	Nil
Principles of Management	Nil
Leadership & Personal Grooming	Nil



Dean

Prof. Dr. Shahab Khushnood

This faculty consists of one degree awarding department:

- Department of Mechanical Engineering

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)

PhD (NUST Islamabad)

Dr. M. Shahid Khalil

BSc Engg (UET Lahore)

PhD (Sheffield UK)

PGD(Quality), PGD (HRM)

Dr. Riffat Asim Pasha

BSc Engg (UET Lahore)

MSc Engg (UET Taxila)

PhD (UET Taxila)

Associate Professors

Dr. Muzaffar Ali

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

PhD (UET Taxila)

Dr. Muhammad Ali Nasir

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

PhD (UET Taxila)

Dr. Muhammad Shehryar

BSc Engg (NUST Islamabad)

MSc Engg (ENSAM France)

PhD (Ecole Polytechnique France)

Dr. Hafiz Muhammad Ali

BSc Engg (UET Taxila)

PhD (Queen Merry UK)

Assistant Professors

Engr. Khalid Masood Khan

BSc Engg (UET Lahore)
MSc Engg (Birmingham UK)

Engr. Zahid Suleman Butt

BSc Engg (Hons) (UET Lahore)
MSc Engg (UET Taxila)

Engr. Muhammad Kashif Iqbal

BSc Engg (Hons) (UET Taxila)

Dr. Tanzeel-ur- Rashid

BSc Engg (UET Taxila)
MSc Engg (UET Lahore)
PhD (UET Taxila)

Engr. Abdul Mobeen

BSc Engg (UET Lahore)
MSc Engg (Aachen Germany)

Dr. Nazeer Ahmad Anjum

BSc Engg (Hons) (UET Taxila)
MSc Engg (UET Taxila)
PhD (UET Taxila)

Dr. Waqar Ahmad Qureshi

BSc Engg (NUST)
MSc Engg (UET Taxila)
PhD Engg (POLITO Italy)

Dr. Abid Hussain

BSc Engg (Hons) (UET Taxila)
MSc Engg (UET Taxila)
PhD (HKUST Hong Kong)

Engr. Rana Atta-ur-Rahman

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
(on higher studies abroad)

Engr. Tayyaba Bano

BSc Engg (Hons) (UET Taxila)
MSc Engg (UET Taxila)
(on higher studies abroad)

Engr. Syed Muhammad Asif Raza

BSc Engg (UET Lahore)
MSc Engg (CUNY USA)

Dr. Aneela Wakeel

MSc (PU Lahaore), PhD (Chongqing China)

Dr. Azhar Hussain

BSc Engg (UET Lahore)
MSc Engg (Hanyang South Korea)
PhD (POLITO Italy)

Lecturers

Engr. Sana Zulfiqar

BSc Engg (NED Karachi), MSc Engg (IST Islamabad)
(on higher studies abroad)

Engr. Aneela Anum

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. M. Sajjad Sabir

BSc Engg (NUST Ibd), MSc Engg (NUST Ibd)
(on higher studies abroad)

Engr. Waqas Asghar

BSc Engg (UET Taxila), MSc Engg (UET Taxila)
(on higher studies abroad)

Engr. Muhammad Usman

BSc Engg (UET Taxila), MSc Engg (UET Taxila)
(on higher studies abroad)

Engr. Najam ul Hasan

BSc Engg (UET Lahore), MSc Engg (UET Taxila)
(on higher studies abroad)

Engr. Muhammad Ebrahim Khalid

BSc Engg (Air University Islamabad)
MSc Engg (UET Taxila)

Engr. Aamir Sohail

BSc Engg (UET Taxila), MSc Engg (PIEAS Islamabad)

Engr. Muhammad Noman

BSc Engg (PU Lahore), MSc Engg (UET Taxila)

Lab Engineers

Engr. Muhammad Ahmed

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Muhammad Imran

BSc Engg (UET Taxila), MSc Engg (UET Taxila)
(on higher studies abroad)

Engr. Hafiz Muhammad Habib

BSc Engg (UET Taxila)

Engr. Sullah ud Din

BSc Engg (UET Taxila)

Engr. Rehan Saghir

BSc Engg (UET Taxila)

Engr. Abdul Rehman

B.Sc. Engg. (UET Taxila)

Engr. Syed Muhammad Kashif

B.Sc. Engg. (UET Taxila)

The Department

Mission

Develop mechanical engineers for prosperous professions

Program Educational Objectives (PEOs)

The program educational objectives for the Mechanical Engineering program are to educate graduates who will be ethical, productive, and contributing members of society. PEOs were reviewed by the faculty during academic audit and curriculum review meeting with leading academic experts. The revised PEOs were approved by the Academic Council of the University. Our objectives are:

- PEO-1:** To produce the ability in mechanical engineers of analyzing, designing, and improving practical thermal and mechanical systems.
- PEO-2:** To provide the ability to communicate effectively and work well on team-based engineering projects.
- PEO-3:** To equip the engineers with managerial qualities in entry-level mechanical engineering positions.
- PEO-4:** To make the engineers able to pursue continued professional development, including the status of a professional engineer.
- PEO-5:** To help the engineers in extending engineering post-graduate studies and research.

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 and application of computational methods and research. The emphasis is on introducing students to modern trends and techniques and advanced knowledge in their fields of specialization. The department has adequate research facilities including licensed software, state of the art laboratories and access to published literature to meet the needs of postgraduate students to do their Masters program. The department is also offering PhD Program since 2001. Uptill now 25 students have completed their PhD degrees. By the end of year 2018 it is expected that the tally of completed PhDs from the MED would be 28 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:

- i. Applied Thermodynamics
- ii. Mechanics of Materials
- iii. Refrigeration & Air Conditioning
- iv. Fluid Mechanics and Hydraulics
- v. Heat and Mass Transfer
- vi. Mechanics of Machines
- vii. Power Plants
- viii. Internal combustion Engines
- ix. Engineering Materials
- x. Modelling and Simulation
- xi. Statics & Dynamics
- xii. Drawing Hall
- xiii. Stress Analysis
- xiv. Mechanical Vibrations
- xv. Fracture Mechanics & Fatigue
- xvi. Renewable Energy Research & Development Center (RERDC)
- xvii. Composite Materials and Smart Structures

- xviii. Fluid Structure Interaction
- xix. Machine Tool
- xx. Advanced Microscopy & Imaging
- xxi. Workshops (Shared)

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

The scope of research in the field of material science remains always a challenging job. The testing of materials; their analysis is always helpful for the new researcher to explore the various properties and characteristics of materials. The Fracture Mechanics & Fatigue laboratory is established in the extension block of Mechanical Engineering Department at ground floor comprising a covered area of 3500 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. Furthermore this laboratory is potentially able to produce internationally scaled research work in the field of fracture mechanics, fatigue of engineering



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

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

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

The Fluid Mechanics lab in the department was renovated and brought up to the state of the art

under the “strengthening of labs project” of HEC. A considerable amount was spent under the project to procure new experimental equipment. The Fluid Mechanics Lab today boasts 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 are available in the Department.

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

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



Courses Under Semester System

BSc Mechanical Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
GS-101	Calculus and Analytical Geometry	3	0
HS-101	Functional English	2	0
GS-102	Applied Physics	2	0
GS-103	Applied Chemistry	2	0
ME-111	Engineering Statics	2	1
ME-131	Workshop Practice	1	1
	Total:	12	2
	Semester Total	14	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CS-101	Computer System and Programing	2	1
EE-101	Electrical Engineering	2	1
GS-104	Linear Algebra and Ordinary Differential Equations	3	0
ME-112	Engineering Dynamics	3	1
ME-113	Engineering Drawing and Graphics	2	1
ME-121	Thermodynamics-I	3	1
	Total:	15	5
	Semester Total	20	
	Total for 1st Year	34	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
IS-201	Islamic Studies/Ethics	2	0
GS-205	Complex Variables and Transform	3	0
ME-222	Fluid Mechanics-I	3	1
ME-214	Mechanics of Materials-I	2	1
ME-215	Machine Design and CAD-I	2	1
ME-223	Thermodynamics-II	2	1
	Total	14	4
	Semester Total	18	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
PS-201	Pakistan Studies	2	0
EE-202	Electronics Engineering	2	1
GS-206	Numerical Analysis	3	0
ME-216	Engineering Materials	2	1
ME-217	Mechanics of Materials-II	3	1
ME-224	Fluid Mechanics-II	2	1
	Total	14	4
	Semester Total	18	
	Total for Second Year	36	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MS-301	Engineering Economics	2	0
HS-302	Technical Report Writing	2	0
ME-318	Machine Design & CAD- II	3	1
ME-325	Heat and Mass Transfer	3	1
ME-332	Precision Engineering & Metrology	2	1
ME-333	Manufacturing Processes –I	2	1
	Total	14	4
	Semester Total	18	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MS(Elec.)-3XY	Management Elective-I	2	0
HS-303	Communication Skills	2	0
EE-303	Control Engineering	2	1
GS-307	Applied Statistics	2	0
ME-319	Mechanics of Machines	3	1
ME-326	Refrigeration and Air Conditioning	2	1
	Total	13	3
	Semester Total	16	
	Total for Third Year	34	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MS(Elec.)-4XY	Management Elective-II	2	0
ME-427	Internal Combustion Engines	2	1
ME-434	Manufacturing Processes-II	2	1
ME-41X	Mechanical Vibrations	3	1
ME(Elec.)-4XY	Technical Elective –I	2	1
ME-499	Design Project	0	3
	Total	11	7
	Semester Total	18	

Semester - VIII

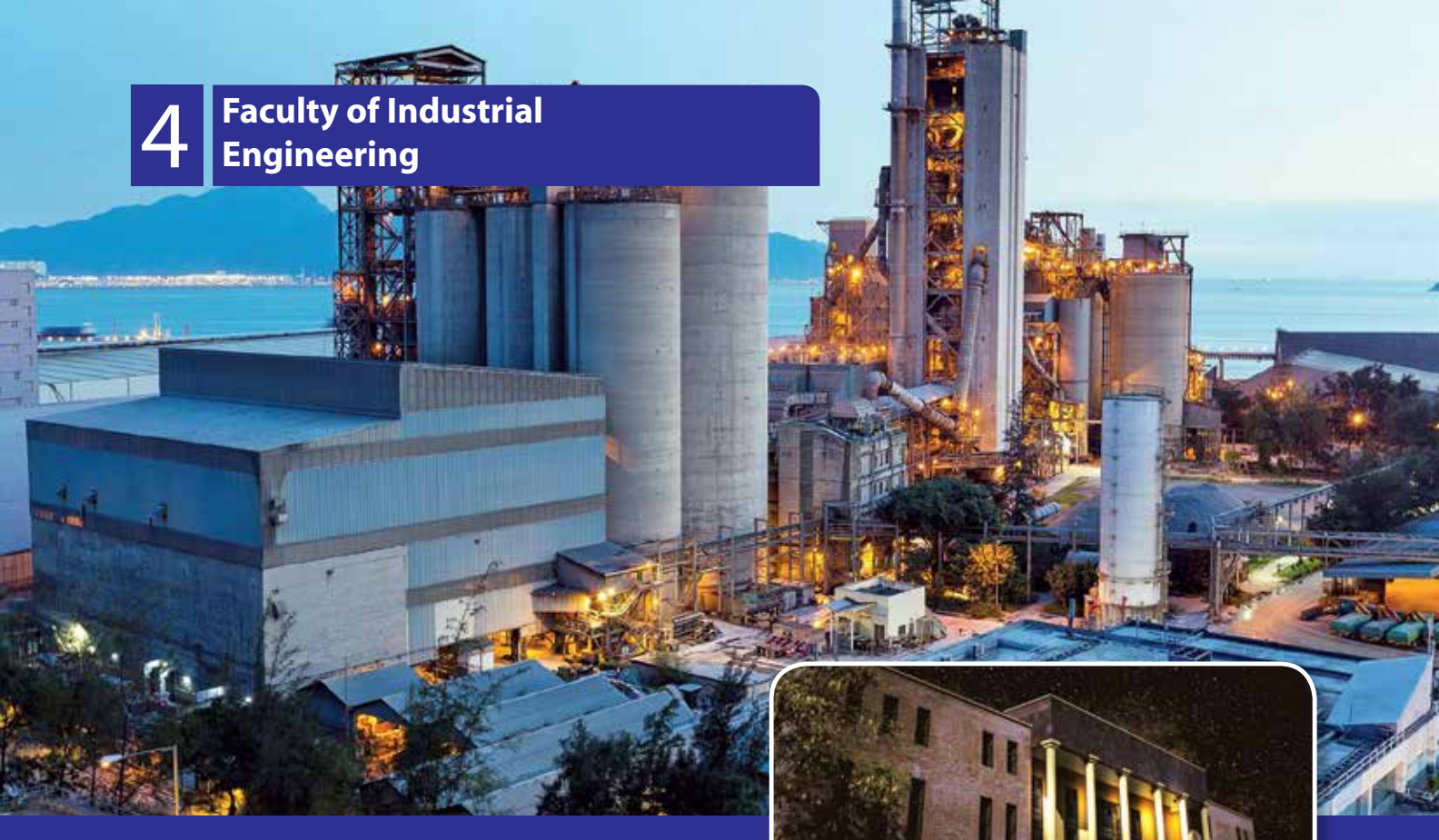
Course Code	Course Title	Credit Hours	
		Theory	Lab.
HS-404	Social Sciences	2	0
ME(Elec.) -4XY	Technical Elective –II	2	1
ME(Elec.) -4XY	Technical Elective –III	2	1
ME(Elec.) -4XY	Technical Elective –IV	2	1
ME-499	Design Project	0	3
	Total	8	6
	Semester Total	14	
	Total for Final Year	32	
	Grand Total for Four Years	136	



List of Elective Courses

Technical Electives: (ME-4XY)	
ME(Elec.)-41_	Tribology
ME(Elec.)-41_	Mechanical Engineering Design Analysis
ME(Elec.)-41_	Stress Analysis
ME(Elec.)-41_	Composite Materials
ME(Elec.)-42_	Power Plants
ME(Elec.)-42_	Renewable Energy Technology
ME(Elec.)-42_	Gas Dynamics
ME(Elec.)-42_	Aerodynamics
ME(Elec.)-42_	Computational Fluid Dynamics (CFD)
ME(Elec.)-42_	Nuclear Engineering
ME(Elec.)-42_	Automotive Engineering
ME(Elec.)-43_	Advanced Manufacturing Systems
ME(Elec.)-43_	Introduction to Mechatronics
ME(Elec.)-43_	Robotics
ME(Elec.)-43_	Maintenance Engineering
Management Electives: (ME-4XY)	
MS(Elec.)-40_	Operations Management
MS(Elec.)-40_	Total Quality Management
MS(Elec.)-40_	Project Management
MS(Elec.)-40_	Operations Research
MS(Elec.)-40_	Engineering Law
MS(Elec.)-40_	Entrepreneur ship
MS(Elec.)-40_	Safety Health and Environment
MS(Elec.)-40_	Suply Chain Management





Dean

Prof. Dr. Mirza Jahanzaib

This faculty consists of one degree awarding department:

- Department of Industrial Engineering

DEPARTMENT OF INDUSTRIAL ENGINEERING

Chairman

Dr. Wasim Ahmad

Professors

Dr. Mirza Jahanzaib

BSc Engg (UET Lahore), MSc Engg (UET Taxila)
PhD (UET Taxila, IRSIP UK)

Associate Professors

Dr. Wasim Ahmad

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (Cranfield Uni. UK)

Dr. Hafiz M. Khuram Ali

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (UET Taxila)

Assistant Professors

Dr. Salman Hussain

BSc Engg (UET Taxila)
MSc Engg. (LSBU UK)
PhD (LSBU UK)

Dr. Haris Aziz

BSc Engg (UET Lahore)
MSc Engg (AIT Thailand)
PhD (AIT Thailand)
(on higher studies abroad)

Dr. Saifullah

BSc Engg (UET Taxila)
MSc Engg (HUST China)
PhD (HUST China)
Post Doc (HUST China)

Dr. Muhammad Shafiq

BSc Engg (NTU Faisalabad), MSc Engg (AIT Thailand),
PhD (AIT Thailand) (on higher studies abroad)

Engr. Syed Turab Haider

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(on higher studies abroad)

Lecturers**Engr. Abid Ali**

BSc Engg (PU Lahore), MSc Engg (UET Taxila)

Engr. Haji Bahader Khan

BSc Engg (PU Lahore), MSc Engg (UET Taxila)

Engr. Zahid Rashid

BSc Engg (PU Lahore), MSc Engg (UET Taxila)

Engr. Zaheer Ahmad

BSc Engg (UET Lahore), MSc Engg (UET Taxila)

Engr. Irshad Yehya

BSc Engg (PU Lahore), MSc Engg (UET Taxila)

Engr. Aisha Tayyab

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MSc Engg (UET Taxila)

Engr. Muhammad Awais Islam

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MSc Engg (PU Lahore)

Lab Engineers**Engr. Muhammad Jawad**

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MSc Engg (UET Taxila)

Engr. Muhammad Usman

BSc Engg (PU Lahore)

Engr. Neelum Iqbal

BSc Engg (UET Lahore)
MSc Engg (UET Taxila)

Engr. Muhammad Abdul Rehman

BSc Engg (PU Lahore)
MSc Engg (PU Lahore)

Introduction

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



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

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

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

Mission of the Department

The mission of the department of Industrial Engineering is 'to produce Industrial engineers who are prepared to fulfill the needs of manufacturing and service sector'.

Program Education Objectives (PEOs)

The program educational objectives are to enable graduates:

- PEO-1:** To become successful Industrial Engineers in their career.
- PEO-2:** To practice knowledge, skills and abilities gained for the advancement of society.
- PEO-3:** To promote professionalism in engineering practice.

Courses of Study

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

1. Computational Industrial Engineering
2. Human Resource's Skill Development
3. Managerial Capabilities Incultation
4. Hightech Manufacturing Technology & Management
5. 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 Metal Forming & Cutting Analysis. The high-tech courses embed in students the capabilities to learn and acquire modern production systems in courses like CAD/CAM, Innovative Manufacturing Systems, Industrial Automation, Robotics and Computer Integrated Manufacturing.



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

The department has eight laboratories and a fully functional workshop. A large Machine Tools Laboratory, Product development center Management system planning & Design Laboratory, Human Factors and Occupational Safety Laboratory, Management System Modeling and Simulation Laboratory, Machining Precision and Metrology Laboratory, Industrial Automation and Control Laboratory equipped with industrial process fault finder, data acquisition and micro-controllers and computer integrated manufacturing laboratory equipped with state-of-the-art CIM (Intellitek) equipment are available in the department. Human Factors and Occupational Safety lab consisting of treadmill, weighing scale, pin boards, sound meters, light meter, spectra light meter and various analysis tools with RULA software. Management System, Modeling and Simulation lab is equipped with modern software like TORA, LINGO, SIMU, ARENA (student version), and Expert Choice, Primavera, Pro Engineer, Minitab, CATIA and related software. Machining Precision & Metrology lab equipped with basic to intermediate level equipment taught to students. Machine Tool and Machining Laboratory consists of Denford machining suit, Boxford, Intellitek milling centers ZCorp Rapid Prototyping and automation modules.

Courses Under Semester System

BSc Industrial Engineering

Semester - I

Course No	Course Title	Credit Hours	
		Theory	Lab.
HU-101	English I (Communication skills/Business skills)	2	1
IE-111	Problem Solving for Industrial Engineers	1	1
IE-112	Workshop Practice	1	1
IE-113	Engineering Drawing and Graphics	2	1
NS-101	Probability and Statistics	3	0
NS-102	Calculus	3	0
	Total	12	4
	Semester Total	16	

Semester - II

Course No	Course Title	Credit Hours	
		Theory	Lab.
HU-102	Logic and Critical Thinking	2	0
NS-103	Differential Equations	3	0
IE-114	Mechanical Technology	2	1
HU-103	Islamic Studies/Ethics	2	0
CS-101	Introduction to Computing	2	1
CS-102	Computer Aided Design and Modeling	2	1
	Total	13	3
	Semester Total	16	
	Total for First Years	32	

Semester - III

Course No	Course Title	Credit Hours	
		Theory	Lab.
IE-221	Engineering Management	2	0
HU-201	Technical writing skills	2	1
IE-211	Engineering Mechanics	2	1
NS-201	Applied Physics	2	1
IE-212	Materials Engineering	2	1
NS-202	Applied Linear Algebra	3	1
	Total	13	5
	Semester Total	18	

Semester - IV

Course No	Course Title	Credit Hours	
		Theory	Lab.
NS-203	Numerical Analysis	3	0
IE-213	Operations Research	3	1
IE-214	Manufacturing processes	3	1
HU-202	Pakistan Studies	2	0
IE-215	Mechanics of Materials	2	1
NS-204	Industrial electronics	2	1
	Total	15	4
	Semester Total	19	
	Total for Second Year	37	

Semester - V

Course No	Course Title	Credit Hours	
		Theory	Lab.
IE-311	Operations of Manufacturing Systems	2	1
IE-312	Applied Machine Design & FEM	3	1
IE-313	Metrology & Statistical Quality Control	2	1
IE-314	Optimization Techniques	2	0
IE-315	Work Study & Methods Engineering	3	1
	Total	12	4
	Semester Total	16	

Semester - VI

Course No	Course Title	Credit Hours	
		Theory	Lab.
CS-301	Industrial Simulation	2	1
IE-316	Human Factors Engineering	2	1
IE-321	Management of Engineering Projects	2	1
HU-301	Engineering Economics	3	0
IE-317	Planning and Scheduling in Manufacturing	2	0
IE-318	Industrial Automation and Control	2	1
	Total	13	4
	Semester Total	17	
	Total for Third Year	33	

Semester - VII

Course No	Course Title	Credit Hours	
		Theory	Lab.
IE-411	Design of Experiments	3	1
IE-412	Industrial Facilities Design	2	1
IE-XXX	Elective I	3	1
IE-XXX	Elective II	3	0
IE-491	Project Phase I	0	3
	Total	11	6
	Semester Total	17	

Semester - VIII

Course No	Course Title	Credit Hours	
		Theory	Lab.
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	0	3
	Total	10	5
	Semester Total	15	
	Total for Fourth Year	32	
	Grand Total for Four Years	134	

List of Elective Courses

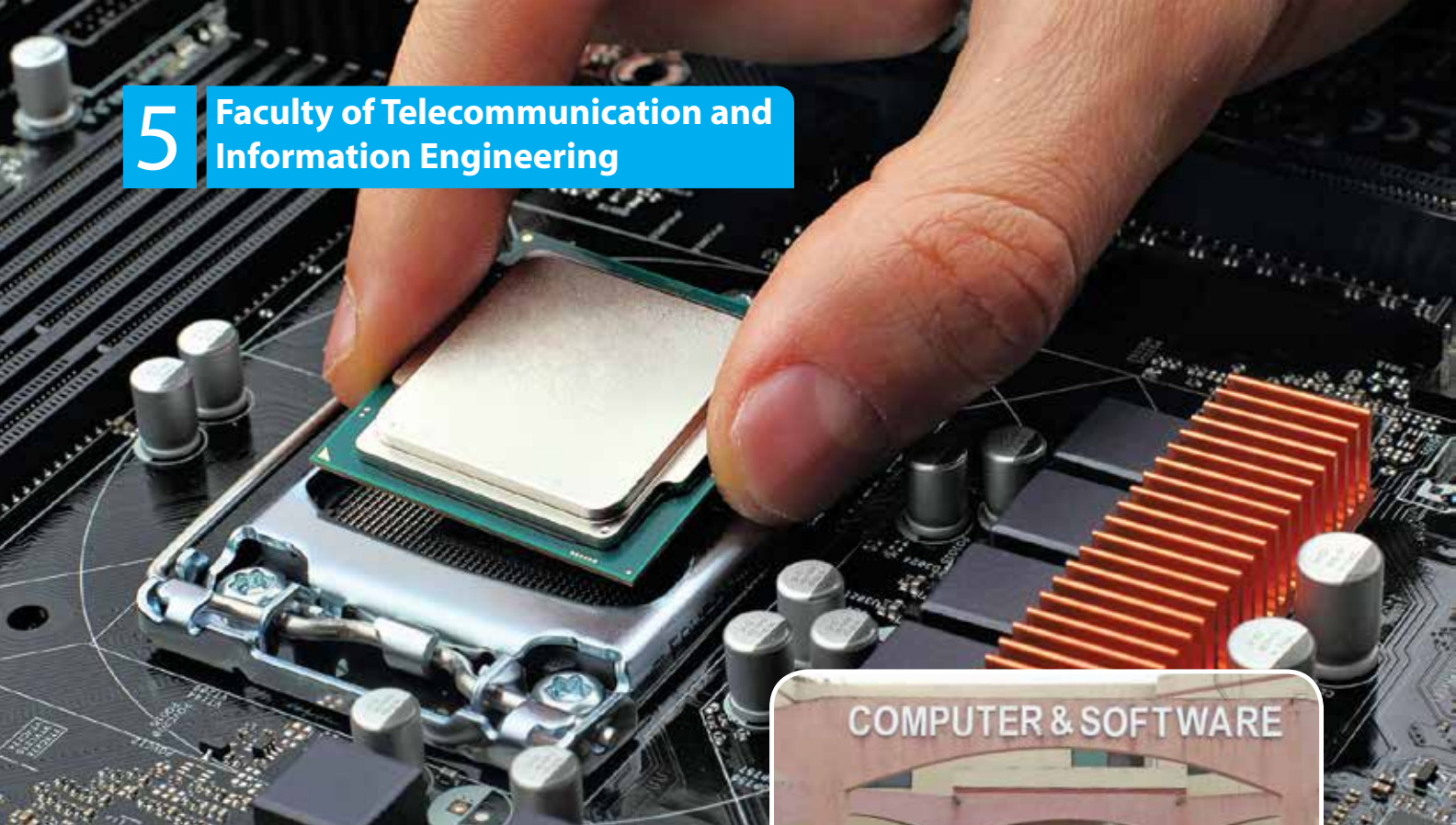
Electives (Manufacturing Track)

Course No	Course Title	Credit Hours	
		Theory	Lab.
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 & reliability Analysis	3	0
IE-422	Special Topics	3	0
IE-423	Productivity Improvement Tools & Techniques	3	0
IE-424	Product Development & Concurrent Engineering	3	0
IE-425	Modeling & Analysis of Manufacturing Systems	3	0

Electives (Management Track)

Course No	Course Title	Credit Hours	
		Theory	Lab.
IE-426	Marketing Management	3	0
IE-427	Human Resource Management	3	0
IE-428	Financial Management	2	1
IE-429	Quantitative & 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
IE-XXX	Professional Engineering practices	3	0





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. Hafiz Adnan Habib

Professor

Prof. Dr. Hafiz Adnan Habib

BSc Engg (UET Taxila), MSc Engg (UET Taxila)
PhD (UET Taxila)

Associate Professor

Dr. Muhammad Haroon Yousaf

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MSc Engg (UET Taxila)
PhD (UET Taxila)

Dr. Muhammad Majid

BSc Engg (UET Taxila), MSc Engg (Sheffield UK)
PhD (Sheffield UK)

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BSc Engg (UET Taxila), MSc Engg (UET Taxila)
PhD (UET Taxila)

Engr. Malik Muhammad Asim

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Dr. Fawad Hussain

BSc Engg (UET Taxila), MSc Engg (UET Taxila)
PhD (UET Taxila)

Engr. Sana Ziafat

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Dr. Muhammad Awais AzamBSc Engg (UET Taxila), MSc Engg (Queens Mary UK)
PhD (UK)**Engr. Afshan Jamil**BSc Engg (UET Taxila) (Gold Medalist)
MSc Engg (UET Taxila)**Engr. Naveed Khan Baloach**

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Dr. Waqar AhmadBSc Engg (CIIT Abd), MSc Engg (UET Taxila)
PhD (POLITO Italy)**Engr. Abdul Rehman Chaudhry**BSc Engg (UET Taxila) , MSc Engg (LUMS)
(on study leave)**Engr. Romana Shahzadi**

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Dr. Muhammad Asif KhanBSc. Engg (UET Taxila)
MSc Engg, PhD (Petronas Malaysia)**Lecturers****Engr. Mona Zafar**

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Noshina Ishaque

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Asim Raza

BSc Engg (CIIT Wah), MSc Engg (UET Taxila)

Engr. Asim Raheel

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Sanay Muhammad Umar Saeed

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Sharoon Saleem

BSc Engg (UET Taxila), MSc Engg (UET Taxila)

Engr. Muhammad Tariq Javed

BSc. Engg (CIIT Wah), MSc Engg (UET Taxila)

Lab Engineers**Engr. Malik Amir Arsalan Awan**

BSc Engg (UET Taxila), MSc Engg (NUST)

Engr. Usman Rauf

BSc Engg (CIIT Wah), MSc Engg (Sweden)

Introduction

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 year 2001 with an intake of fifty students. Initially, it was setup in the building of Electrical Engineering Department and classes were conducted in evening session only. In the meantime, construction of a separate building for department worth Rs. 40 million with funding from HEC (Higher Education Commission) was started, which completed in year 2006. Building comprises of two floors out of which ground floor is for Computer Engineering

Department. This floor has four class rooms, five labs, one examination hall, twenty five offices and other utility rooms. Department has five laboratories with sufficient hardware and computing facilities for practical work. All labs are provided with high speed network and department also has Wi-Fi coverage for internet connectivity in general. Computer engineering department also arranges various events in order to encourage students to take part in those events and groom their technical as well as social skills.

Program Educational Objectives (PEOs)

Graduates of the Computer Engineering Program are expected to have:

- PEO-1:** Necessary background and technical skills to analyze problems and design solutions in domains like embedded systems, computer aided systems, system administration and integration.
- PEO-2:** Ability to practice computer engineering skills to serve local and global industries and organizations as consultants and entrepreneurs.
- PEO-3:** Success with awareness and commitment to their ethical and social responsibilities, both

as individuals and in team environments

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

Laboratories

1. Electronic Systems Lab

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

2. Data Communication & Networking Lab

Data Communication and networking lab is equipped with CISCO sponsored network related hardware alongwith 40 Dell 760 computing machines. Lab is also providing vibrant services as CISCO local academy. Lab offers services in the areas of computer communication and networks etc.

3. Computing Lab

Computing lab is equipped with latest forty HP Prodesk 400 Computing machines. Lab offers services for core computing areas e.g. computer fundamentals programming database management systems, OOP and data structures and algorithms

4. Digital Systems Lab

Digital systems lab contains specialized hardware in the domain of digital system design. Lab is equipped with micro controller kits (80C51 and PIC 18 series) micro processor kits and FPGA Kits. This lab is also equipped with twenty Dell Optiplex-790 machines. Digital Systems Lab offers courses of microprocessor & interfacing, microcomputer systems, VLSI systems and digital systems design.

5. VIP Lab

Video and image processing lab was established as a project funded by Higher 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 final year projects.

Technical Societies in the Department

Technical societies are established in the department that serves guideline for the students to choose their profession after completion of 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 students and faculty in their corresponding areas 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 area 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 serves 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

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/uet/CPED/cms_CPED.

Office of Undergraduate Studies

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

Course Under Semester System

BSc Computer Engineering

SEMESTER – I

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

SEMESTER – II

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

SEMESTER – III

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

SEMESTER – IV

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

SEMESTER – V

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

SEMESTER – VI

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

SEMESTER – VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
CP-401	Preliminary Project Studies	0	2
MS-402	Computer Engineering Project Management	3	0
HU-403	Engineering Economics	2	0
HU-404	Professional Ethics	2	0
CP-405	CEDE-II	3	1
CP-406	IDEE-II	3	1
	Total	14	4
	Semester Total	17	

SEMESTER – VIII

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

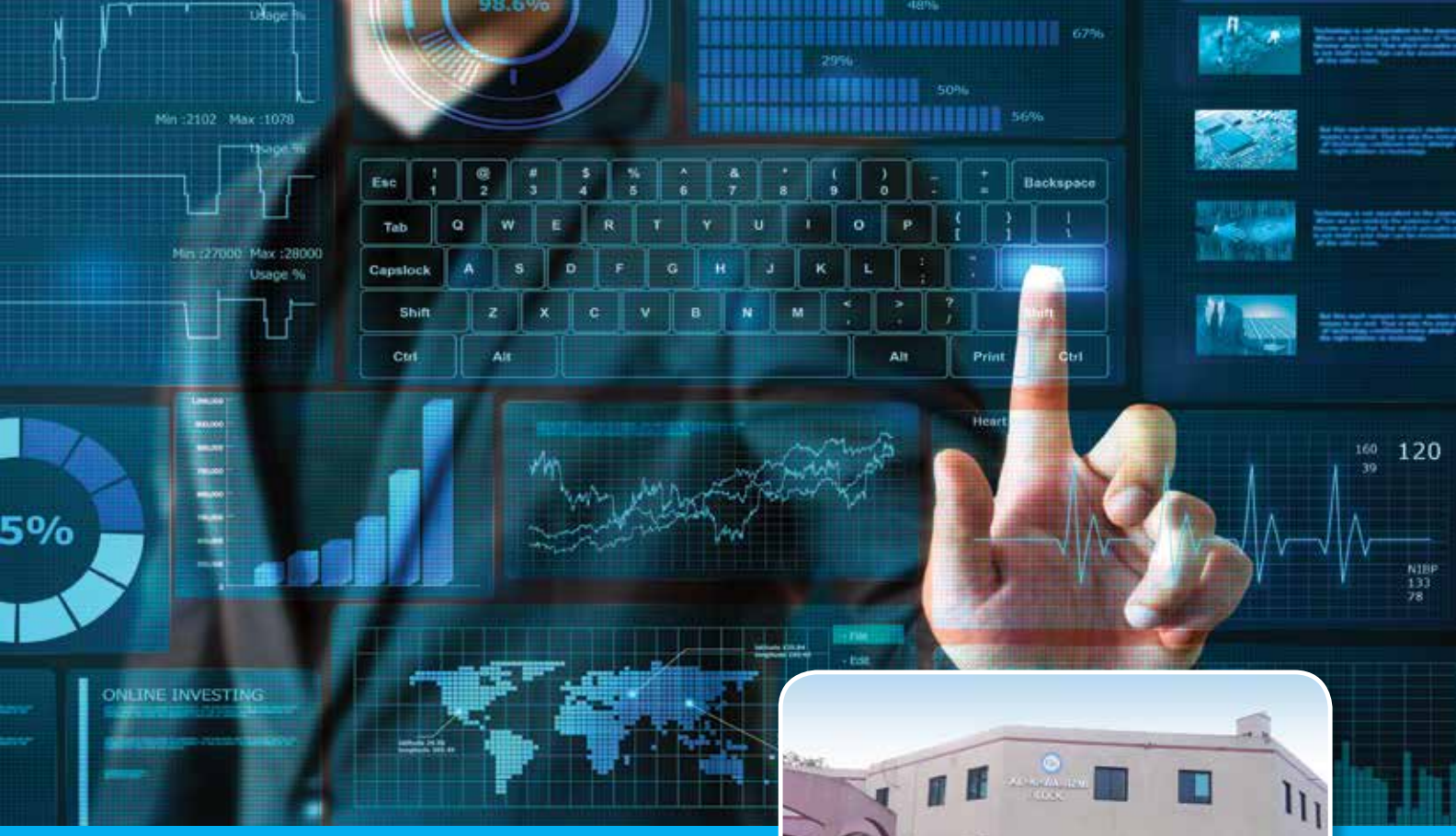


Elective Courses for Computer Engineering

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

Inter-Disciplinary Engineering Electives (IDEE)		
Course Code	Course Title	Credit Hours
	Advance Algorithms	3+0
	Fault Tolerant Computing	3+0
	Network Security & Cryptography	3+0
	Data Warehousing & Mining	3+0
	Control Engineering	3+1
	Computer Graphics	3+1
	Digital Communication	3+1
	Robotics	3+1
	Communication Systems	3+1
	Software Quality Assurance	3+1
	Machine Learning	3+1





DEPARTMENT OF SOFTWARE ENGINEERING

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Engr. Rabia Arshad

BSc Engg (Hons., UET Taxila)

Engr. Saba Awan

BSc Engg (Hons., UET 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. Department is housed on first floor of the building which 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 Mission

To produce graduates with a broader knowledge and skills in the field of Software Engineering who can impact society in a transformative way – regionally, nationally and globally.

Program Educational Objectives (PEOs)

Graduates of Software Engineering Program shall be able to:

PEO-1: Engineering Quintessence

Graduates will apply theoretical and practical knowledge of Software Engineering for analysis and design of quality software systems of varying complexities. Abilities and skills of analytical thinking, logic formulation, algorithm construction, complex designing, appropriate validation and economic maintenance will be in calculated. They will also be prepared to successfully pursue higher studies.

PEO-2: Social Engagement

Graduates will be sensitive to environmental, professional, civic and societal contexts, committed to ethical action, and engaged in life-long learning to remain effective members of their communities. They will be equipped with skills and attitude to be responsible, effective and thoughtful contribution to society.

PEO-3: Entrepreneurship and Innovation

Graduates will apply their abilities, talents and insights creatively and productively in fields and professions beyond those explicitly represented, in, or anticipated by, the Software Engineering curriculum. Graduates will make their mark on the world in many way; they will start companies, become professors, invent technologies, and make creative contributions in every profession, science, and art.

PEO-4: Leadership

Graduates will take initiative, and demonstrate resourcefulness. Equipped with interpersonal, leadership and communication skills, they will collaborate in multidisciplinary teams and will be leaders in their organizations, their profession and in society.

Laboratories**1. 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.

2. 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 of Software Engineering.

Society Advisor: Ali Javed

3. DOT IT Lab

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

4. 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.

5. 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 obsolete within months. There is every need to keep an eye on changing trends in the field. For the above stated purpose a society has been established in the Department of Software engineering named SOFTDESK. The major achievement of SOFTDESK is to organize UET Taxila Olympiad at National level where universities from all over Pakistan participates every year.

b. Software Technologies Incubation Centre (STIC)

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



Courses Under Semester System

BSc Software Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
SE-101	Introduction to Computing	3	1
ME-102	Discrete Structures	3	0
HU-103	Applied Physics	3	1
HU-104	English I (Functional English)	3	0
MA-105	Calculus and Analytical Geometry	3	0
	Total:	15	2
	Semester Total	17	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
SE-106	Introduction to Software Engineering	3	0
EE-107	Digital Logical Design	3	1
SE-108	Programming Fundamentals	3	1
MA-109	Linear Algebra	3	0
HU-110	Communication Skills	3	0
	Total	15	2
	Semester Total	17	
	Total for First Year	34	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MA-201	Numerical and Symbolic Computing	2	1
SE-202	Software Requirement and Specification	2	1
SE-203	Data Structures & Algorithm	3	1
HU-204	Pakistan Studies & Islamiyat	3	0
HU-205	Technical Report Writing	3	0
	Total	13	3
	Semester Total	16	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
SE-206	Operating Systems	3	1
SE-207	Software Architecture Design	3	0
SE-208	Object Oriented Programming	3	1
SE-209	Introduction to Database System	3	1
MG-210	Principles of Management	3	0
	Total	15	3
	Semester Total	18	
	Total for Second Year	34	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
SE-301	Software Verification & Validation	2	1
SE-302	Object Oriented Software Engineering	2	1
SE-303	Software Engineering Economics	3	0
MA-304	Probability & Statistics	3	0
SE-305	Web Engineering	3	1
	Total	13	3
	Semester Total	16	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
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	18	
	Total for Third Year	34	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
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
CS-405	Software Project Management	2	1
HU-406	Human Resource Management	3	0
	Total	13	5
	Semester Total	18	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
SE-407	Human Computer Interaction	3	0
SE-408	Design Project	0	4
SE-409	Elective General *	3	0
SE-410	Professional Practices	3	0
MG-411	Marketing	3	0
	Total	12	4
	Semester Total for Part -I & II	16	
	Total for Final Year	34	
	Grand Total for Four Years	136	

Elective Courses for Software Engineering

Domain Specific Elective Courses

Course Code	Course Title
	System for Small & Mobile Platforms
	Safety Critical Systems
	Net-Centric Systems
	Information Systems and Data Processing
	Bio Medical System
	Mobile Application Development
	Enterprise Security Architecture
	Enterprise Systems 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 Code	Course Title
	Data Authentication and Security
	Network Security and Data Encryption
	Analysis of Algorithms
	Advance Operating Systems
	Data Warehousing & Data Mining
	Software Metrics
	Advanced Programming Techniques
	Web Application and Design
	System & Network Programming
	Advanced Database Management System
	Formal Methods in Software Engineering
	Introduction to Bio Informatics
	Computer Vision
	Simulation and Modelling
	Advance Software Technologies
	Semantic Web
	Wireless Networks

Course Code	Course Title
	Advance Topics in Software Engineering
	Theory of Intelligent Systems
	Mobile & Pervasive Computing
	Open Source Systems
	Computer Forensic
	Compiler Construction
	Advanced JAVA with Emphasis on Internet Applications
	Distributed Computing
	Enterprise System Engineering
	Automata Theory & Formal Languages
	Design Patterns
	Artificial Neural Networks
	Machine Learning
	Internet of Things
	Cloud Computing
	Business Process Engineering





DEPARTMENT OF TELECOMMUNICATION ENGINEERING

Chairman

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MS Telecom Management (INT France)

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Engr. Asma Ejaz

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Engr. Aasma Shafi Randhawa

BSc Engg (GC Uni, FSD)

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The Department

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

Established in 2007, Department of is concerned with the theory, development and application of telecommunication systems, their design and integration. The objectives of the program is to provide students with a strong theoretical and practical background in the field of telecommunication, along with the engineering analysis, design and implementation skills necessary to work between the two. The department offers 4 years degree program of BSc Telecommunication Engineering.

Mission

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

- Providing value-added education through driven and qualified faculty
- Upholding a supportive environment for

imparting affordable education

- Stimulating industry-academia linkage by industry involvement and entrepreneurial activities.

Program Educational Objectives (PEOs)

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



Laboratories

At present, Department of Telecommunication Engineering has six laboratories for practical demonstration and research work graduates. The semester projects associated with courses taught are carried out in the same laboratories. These laboratories are equipped with high quality equipment to provide a student hands-on training. The detail of each laboratory is as follows:

1. Electronics & Communication System Lab

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

2. Antenna and Microwave Lab

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

3. RF Lab

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

4. Embedded Systems Research Lab

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

5. DSP and Microcontroller Lab

The purpose of this lab is to conduct lab experiments for Digital Signal Processing and Microprocessors and Interfacing techniques. This lab is equipped with all the necessary hardware and software facilities.

6. Telecommunication Innovation Center

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



Courses Under Semester System

BSc Telecommunication Engineering

Semester - I

Course Code	Course Title	Credit Hours
HU-101	Functional English	3
CS-102	Introduction to Computing	2
CS-102 (L)	Introduction to Computing	1
MA-103	Calculus & Analytical Geometry	3
EE-104	Circuit Analysis	3
EE-104 (L)	Circuit Analysis	1
MA-105	Applied Physics	3
MA-105 (L)	Applied Physics	1
EE-106 (L)	Electric Workshop	1
	Semester Total	18

Semester - II

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

Semester - III

Course Code	Course Title	Credit Hours
EE-203	Electronic Devices and Circuits	3
EE-203 (L)	Electronic Devices and Circuits	1
MA-105	Multivariable Calculus	3
HU-205	Pakistan Studies	2
	IDE- Elective 1	2
	IDE- Elective 1	1
HU-405	Engineering Economics	3
MA-105	Linear Algebra	3
	Semester Total	18

Semester - IV

Course Code	Course Title	Credit Hours
TE-207	Probability Methods in Engineering	3
EE-208	Amplifiers & Oscillators	3
EE-208 (L)	Amplifiers & Oscillators	1
EE-209	Signals & Systems	3
EE-210	Digital Logic Design	3
EE-210 (L)	Digital Logic Design	1
HU-305	Technical Report Writing & Presentation	3
	Semester Total	17
	Total for Second Year	35

Semester - V

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

Semester - VI

Course Code	Course Title	Credit Hours
TE-306	Digital Communication	3
TE-306 (L)	Digital Communication	1
TE-307	Antennas & Wave Propagation	3
TE-307 (L)	Antennas & Wave Propagation	1
TE-308	Wireless Communication & RF Planning	2
TE-304	Digital Signal Processing	3
TE-304 (L)	Digital Signal Processing	1
	IDE Elective-II	3
	Semester Total	17
	Total for Third Year	35



Semester - VII

Course Code	Course Title	Credit Hours
TE-401	Microwave Engineering	3
TE-401 (L)	Microwave Engineering	1
TE-402	Optical Fiber Communication	3
TE-402 (L)	Optical Fiber Communication	1
TE-403	Final Year Design Project -I	3
	MBC Depth Elective-I	3
HU-404	Professional Practices	3
	Semester Total	17

Semester - VIII

Course Code	Course Title	Credit Hours
TE-405	Transmission & Switching Systems	3
TE-405 (L)	Transmission & Switching Systems	1
TE-406	Final Year Design Project -II	3
	MBC Depth Elective-II	3
	Social Science Elective	3
MG-407	Entrepreneurship	3
	Semester Total	16
	Total for Fourth Year	33
	Grand Total for Four Years	138

Elective Courses for Telecommunication Engineering

Major Based Core (MBC) Depth Electives

Course Code	Course Title
TE-408	Multimedia Systems
TE-409	Digital Electronics
TE-410	Digital Image Processing
TE-411	Satellite Communication
TE-412	Telecom Standards and Regulations
TE-413	Telecom Traffic Engineering
TE-414	Spread Spectrum Communications
TE-415	Speech Processing
TE-416	Next Generation Networks
TE-417	Network Security
TE-418	Broadband Communication Networks
TE-419	Radar System Engineering
TE-420	Telecommunication Networks Management
TE-421	Compression Techniques
TE-422	Telecommunication Systems

IDE Elective-I

Course Code	Course Title
EE-211	Numerical Methods in Engineering
CS-212	Operating Systems
CS-213	Data Structure and Algorithms
CS-214	Database Management systems

IDE Elective-II

Course Code	Course Title
EE-422	Embedded Systems
TE-423	Artificial Intelligence
TE-424	Reliability in Telecommunication Systems
EE-425	VLSI Systems

Social Sciences Electives

Course Code	Course Title
MG-422	Organization Behavior
HU-423	Psychology
HU-424	Public Policy
HU-425	Sociology
HU-426	Political Science
HU-427	Pakistani Culture and Society





DEPARTMENT OF COMPUTER SCIENCE

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Dr. Farrukh Zeeshan Khan
PhD (Austria)

Dr. Zeeshan Iqbal
PhD (UET Taxila)

Dr. Syed Muhammad Adnan Shah
PhD (UET Taxila)

Dr. Muhammad Javed Iqbal
PhD (Malaysia)

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MS (NUST)
MCS (UOS)

Abid Rauf
MS (China)

Mehmoon Anwar
MS (IIUI Islamabad)

Rashid Amin
MS (IIUI Islamabad)

The Department

The Department of Computer Science is offering BS Computer Science, B.Sc Cyber Engineering Technology, MS Computer Science, MS Data Science and PhD program in a broad range of specializations.

The Computer science is the scientific and practical approach to computation and its applications. A computer scientist specializes in the theory of computation and the design of computational systems. Computer science degree provides tremendous career opportunities around the globe with attractive pay packages. Computer science education is being boosted by US government. US government is promoting computer science education at all levels from K-12 to higher education. US government has declared computer science as a basic skill that must be learnt by every individual. This trend is being followed by European countries and India.

Computer science has served human beings from their personal life to all sectors of business. Computer science evolved and produced new mechanisms and services for human beings.

Computing is now supporting human being everywhere from personal life to managing businesses. Such involvement has created great number of jobs for computer scientists. Top careers for computer scientists are: software application development, computer systems analyst, computer system engineers, network system administrator, database administrator, business intelligence analyst, web developer, smart phone application development, computer programmer, big data, cloud computing.

Computer science department considers latest job trends for computer scientists in international market. The department has objective to train students with the skills that are high in demand in international job market. Department has particularly focused on training students about big data, data science, cloud computing, android app development, iOS app development and SAP. These are among the most demanded skills for computer scientists.

The department primarily teaches curriculum recommended by National Computing Education Accreditation Council (NCEAC). In addition, the department has introduced subjects required for skills development in big data, cloud computing, android and iOS app development to target international job market.

The department has academic partnerships with leading companies of computer science industry. So far, department has academic partnership with Cloudera, Oracle, VMWare, Amazon Web Service, SAP and Microsoft. The department has got industry developed curriculum by these academic partnerships. The department has also received software being deployed in industry from these academic partnering companies.

Computer science department has established 2 computing labs, 1 apple lab, 1 data science lab for experimentation of students. Students are provided wireless internet access. Department is planning to bring your own device (BYOD) facility to let students use software on their own laptops. The department is also providing blended learning facility to the students. Video lectures are recorded and students can view these lectures after class to enhance their learning.



Computer Science Department LABS

1. **General Computing Lab:** Computing is general purposes lab for the students to perform experiments of computer programming, web programming, designing and development.
2. **Cloud Computing Lab:** Cloud computing is a type of Internet-based computing that provides shared computer processing resources and data to computers and other devices on demand. This lab offsets the need to store the data locally, potentially saving costs.
3. **Digital Logic Design Lab:** The Digital Logic Design Lab (DLD Lab) is one of the most important and well-equipped lab of the Department of Computer Science at University of Engineering and Technology, Taxila. The Lab is well equipped with both hardware and software facilities required by the students to perform the necessary experiments designed for this lab.
4. **Final Year Project Lab:** Final year project lab is developed to facilitate the students in design development, completion, and testing of their final year projects.

For all the Labs in Computer Science Bring Your Own Device BYOD Architecture is encouraged to facilitate the students. This step improves the quality of education. A student may interact through his or her own devices to connect the department for curriculum-related activities. BYOD is most likely to cost-effective and learning affecting for student individually as well as group studies. Computer science department promotes the BYOD culture for students, teachers, and staff.

COMPTECH (Society of Computer Technology)

Advisor: Dr. Muhammad Munwar Iqbal (Assistant Professor, CPSD)

Patron: Dr. Syed Aun Irtiza (Chairman, CPSD)

Mission & Objectives

- To invite the speakers from all over Pakistan, so they can guide the students in their respective fields.
- To provide the chance to collaborate with international computing and scientific societies
- Through this platform, the student will be able to participate in the completions being held other

institutions.

To organize Extra Curricular activities and events for the Students in order to foster their intellectual, literary and artistic potentials

Events Organized

- 1) Web Programming
- 2) Poster Design
- 3) Crypto Challenge/Cryptography
- 4) UNO Card Game
- 5) Rubik's Cube
- 6) Minute to Win it
- 7) Closing Ceremony (Bonfire)
- 8) (QUICK CODING)
- 9) (WIN, DRAW or LOSE)

Academic Partnerships

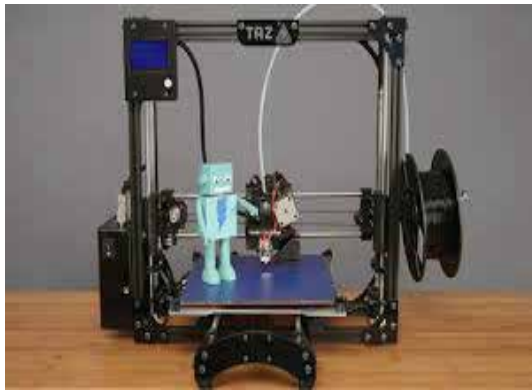
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ORACLE

vmware

SAP
Partner





Courses Under Semester System

BS Computer Science

Semester - I

Course Code	Course Titles	Credit Hours
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
EL-101	Basic Electronics	2+1
Semester Total		17

Semester - II

Course Code	Course Titles	Credit Hours
CS-103	Object Oriented Programming	3+1
CS-104	Discrete Structures	3+0
EG-102	Technical and Business Writing	3+0
MT-102	Probability & Statics	3+0
PK-101	Islamic and Pak Studies	3+0
Semester Total		17

Semester - III

Course Code	Course Titles	Credit Hours
CS-201	Data Structures and Algorithms	2+1
CS-202	Digital Logic and Design	2+1
EG-201	English –III	2+0
MG-201	University Elective – II	2+1
MG-202	Linear Algebra and Differential Equations	3+0
Semester Total		14

Semester - IV

Course Code	Course Titles	Credit Hours
CS-204	Operating Systems	2+1
CS-205	Introduction to Software Engineering	3+0
CS-206	Computer Architecture	2+1
CS-208	CS Elective–I	3+0
CS-203	Introduction to Database Systems	3+1
MT-203	Numerical Computing	3+0
Semester Total		18

Semester - V

Course Code	Course Titles	Credit Hours
CS-301	Human Computer Interaction	3+0
CS-302	Theory of Automata & Formal Languages	3+0
CS-303	Operations Research	2+1
CS-304	CS Elective–II	3+0
CS-305	CS Elective–III	3+0
CS-306	Design and Analysis of Algorithms	3+0
Semester Total		18

Semester - VI

Course Code	Course Titles	Credit Hours
CS-307	CS Elective–VI	3+0
CS-308	Data Warehousing	3+0
MG-301	University Elective –III	3+0
CS-309	Computer Communication and Networks	3+0
CS-310	CS Elective-V	3+0
CS-311	Smart Application Development	3+0
Semester Total		18

Semester - VII

Course Code	Course Titles	Credit Hours
CS-400	Software Design Project-I	3+0
CS-401	CS Elective–VI	3+0
CS-402	Compiler Construction	3+0
CS-403	Big Data Analytics	3+0
CS-404	CS Elective- VII	3+0
CS-405	Artificial Intelligence	3+0
Semester Total		18

Semester - VIII

Course Code	Course Titles	Credit Hours
CS-406	Software Design Project-II	3+0
CS-407	Wireless Networks	3+0
CS-408	Software Quality Assurance	3+0
SS-401	University Elective – IV	3+0
Semester Total		12
Grand Total for Four Years		132

Computer Science Elective courses

Course Code	Course Titles	Credit Hours
CS	Operations Research	3+0
CS	Simulation and Modeling	3+0
CS	Computer Graphics	2+1
CS	Digital Image Processing	2+1
CS	Digital Signal Processing	2+1
CS	Computer Vision	2+1
CS	Software Engineering	3+0
CS	Advance Software Engineering	3+0
CS	Principles of Programming Languages	2+1
CS	Data Communication	3+0
CS	Distributed Computing	2+1
CS	Data and Network Security	3+0
CS	Wireless Networks	2+1
CS	Telecommunication Systems	2+1
CS	Microprocessor Interfacing	2+1
CS	Web Engineering	2+1
CS	System Programming	2+1
CS	Distributed Database Systems	2+1
CS	Data Warehousing	2+1
CS	Numerical Computing	3+0
CS	Expert Systems	3+0
CS	Artificial Neural Network	3+0
CS	Fuzzy Logic	3+0
SC	Software Quality Assurance	3+0
SC	Advance Object-Oriented Programming(JAVA)	3+1
CS	Network Analysis and Design	3+0
CS	Network Management	3+0
CS	Game Programming	3+0
CS	Cryptography	3+0
CS	Network Programming	3+0
CS	Cloud Computing	3+0
CS	Visual Programming	3+0
CS	Object Oriented Software Engineering	3+0
CS	Computer Law	3+0
CS	Computer Animation	3+0
CS	Modern Programming Language	3+0
CS	Information Security	3+0
CS	Data and Network Security	3+0
CS	Advance Topics in Computer Science	3+0

University Elective courses

Code	Course Title	Credit Hours
MG	Financial Accounting	3+0
MG	Financial Management	3+0
MG	Human Resource Management	3+0
MG	Marketing	3+0
SS	Economics	3+0
PS	Psychology	3+0
SS	International Relations	3+0
SS	Foreign/Regional Language (French, German, Sindhi, Punjabi, Urdu etc.)	3+0
SS	Philosophy	3+0
MG	Introduction to Management	3+0
QA	Quality Control & Engineering Standards	3+0
QA	Quality Assurance and Management System	3+0
QA	Quality Improvement tools & Methods	3+0
EP	Entrepreneurship	3+0



E-ROZGAAR PROGRAM PARTNERSHIP



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

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

The main objectives of this initiative are as follows:

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



6 Faculty of Basic Sciences and Humanities

Digital Humanities



DEPARTMENT OF BASIC SCIENCES AND HUMANITIES

Dean

Prof. Dr. Mirza Jahanzaib

Chairman

Dr. Muhammad Mudassar

Associate Professor

Dr. Muhammad Mudassar
PhD Mathematics (UET Lahore)

Assistant Professors

Dr. Nasir Siddiqui
PhD Mathematics (QAU Islamabad)

Dr. Muhammad Sultan
PhD Chemistry (QAU Islamabad)

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

Dr. Azeem Shahzad
PhD Mathematics (QAU Islamabad)

Dr. Muhammad Arshad Javed
PhD Physics (IU Bahawalpur)

Ms. Safeera Batool
M. Phil Mathematics (QAU Islamabad)
(on Leave for Higher studies)

Mr. Zaffer Elahi
M. Phil Mathematics (UET Lahore)
(on Leave for Higher studies)

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

Ms. Naila Maqsood
M. Phil. Pakistan Studies (QAU Islamabad)
PhD. Govt. and Public Policy (NDU Islamabad)

Dr. Muhammad Altaf
PhD Statistics (China)

Dr. Muhammad Touqeer
PhD Mathematics (PU Lahore)

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

Dr. Muhammad Nadeem
Ph.D Physics (Malaysia)

Lecturers

Ms. Kulsoom Rahim
M.Phil Physics (QAU Islamabad)
(on Higher Studies Abroad)

Mr. Muhammad Tariq
M.Phil Physics (QAU Islamabad)
(on Higher Studies Abroad)

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)
(on Leave for Higher Studies)

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

Mr. Jawad Ahmad
M.Phil Mathematics (QAU Islamabad)
(on Leave for Higher Studies)

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

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

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

Ms. Sabahat Jaleel
M. Phil. Pakistan Studies (QAU Islamabad)

Mr. Muhammad Irfan
M. Phil. Islamic Studies (QAU 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 University 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 etc.

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 enlighten the soul and mind of the students and enable them to get appraisal of tenets of Islam so that they may perform their duties with integrity and diligence when the future responsibilities of serving the nation will be





bestowed upon them. The Non-Muslims students are offered courses in the subject of Ethics as well.

The subject of Pakistan Studies was introduced at all levels for undergraduate first time during 1982. This course has been designed as a compulsory subject for the students at undergraduate level. The course framework is issue oriented. It has many dimensions, the historical and ideological background of Pakistan, the process of governance and national development as well as the issue arising in the modern age and posing challenges to Pakistan. The course was designed with a vision, the Pakistan Studies should open a window to future.

It is an established fact that English is an international language, so proficiency in English language is required to compete with the modern world. Different courses are offered in different departments to enhance student's English language skills for professional purposes. Effective communication skills include everything from facial expression to visual literacy, from anxiety management to verbal skills, from body language to document presentation. Students can become more effective communicators by cultivating competency through these courses. These courses include Technical Report Writing as well which enhances students to write well in professional life.

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, quantum mechanics and Fluid Mechanics.

The research field interests in the subject of Physics are; Safety and Reliability of Nuclear Industry, Nano Physics, Study Material Properties with X-ray Diffractometer (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.

MS Programs

Keeping in view the importance of inter-disciplinary research, Engineers-Scientists effective collaboration, and better utilization of research potential of Basic Sciences Faculty; the department has already started the MS Program in Physics and Mathematics. To facilitate MS students in their research, the department has signed a research agreement with National Institute of Laser and Optorotics (NILOP) on April 30, 2014.



SERVICES AND COMMON FACILITIES





7 Library

7.1 Main Library

The Central Library of the University plays a vital role in dissemination of knowledge, teaching, research, and extension services. It has a seating capacity for about 400 readers at its different halls, which provide congenial conditions for study. The Library is stocked with encyclopedias, dictionaries, hand books, 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 09:00 am - 03:00 pm

7.2 Library Resources

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

7.3 Reference Section

Reference resources are located at the ground floor.

They include the following:

- Reference Books: This section consists of dictionaries, encyclopedias, manuals, technical/ industrial standards, plus one copy of each title pertaining to engineering disciplines etc.
- Thesis/ Dissertations: Thesis of MSc. Engineering and PhD students are available in this section.
- Periodicals/ Journals: Central Library has a vast variety of research journals, proceedings, coffee table magazines and newspapers.
- Computer Lab. This lab consists of 100 computers with free access to internet and electronic resources.
- CD/DVD Burn Facility: is also available to library users on providing a writable CD/DVD.

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

7.4 Book Bank

This section consists of textbooks recommended by the faculty. Every faculty member can CHECK OUT

(borrow) 10 (ten) books while every undergraduate student is allowed to CHECK OUT (borrow) 08 (eight) textbooks for an academic session from this section.

7.5 Circulation Section

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

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

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

7.6 Central Library Automation System

Central Library has launched its online web OPAC using Koha (an integrated library system). This ILS has been prepared according to international standards. Library users can check their CHECK OUTS, CHECK INs, borrowing status/history and fines. They also can prepare their private as well shared lists and can upload their own documents and much more through internet from anywhere, any time. To access the database please follow the link below:

<http://web.uettaxila.edu.pk/uet/Library.asp>

OR

Main university website >> Life at UET >> Library.

Please email us at: librarian.uet@gmail.com

7.7 Online Resources

Digital Library

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

EBRARY

ebrary offers a wide variety of multidisciplinary content. It acquires large number of titles from leading academic publishers. Users have full access to 142,000 ebooks through this source. This ebrary consists of the following areas:

- Engineering and Allied Technologies
- Computers and Information Technology
- Pure Sciences
- Life & Physical Sciences
- Social Sciences & Humanities

ASTM

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

7.8 Online Accessible Databases

AMERICAN SOCIETY OF CIVIL ENGINEERING (ASCE)

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

ASSOCIATION OF COMPUTING MACHENERY (ACM)

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





INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)

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

AMERICAN PHYSICAL SOCIETY (APS)

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

AMERICAN ASSOCIATION OF PHYSICS TEACHERS (AAPT)

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

AMERICAN INSTITUTE OF PHYSICS (AIP)

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

OPTICAL SOCIETY OF AMERICA (OSA)

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

JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA (JASA)

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

ELSEVIER (Science Direct)

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

ESDU - Engineering Solutions for Academia

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

- Structural Engineering

MCGRAW HILL COLLECTIONS

Following collections of McGraw Hill are accessible in this collection:

- McGraw-Hill's Access Science
- McGraw- Hill's Access Engineering

PROJECT MUSE

- Project MUSE provides access to 430 full-text journals from 108 publishers in humanities and social science. MUSE pricing meets library needs around the world. It covers almost all subjects like:
 - Technology
 - Languages & Linguistics
 - Economics
 - Social Sciences & Humanities
 - Art
 - Architecture
 - Literature
 - History & Culture
 - Religions
 - Philosophy and so on...

SCIENCE ONLINE

- Provides access to the full text of the prestigious Science publication.
- It allows users to search within Science and across a multitude of scientific journals.

SPRINGER LINK

- SpringerLink provides access to 503 full-text



Springer-Verlag Journals and 738 full-text journals formerly published by Kluwer Academic Publishing.

- One of the world's leading information services for Science, Technical and Medical journals.

TAYLOR & FRANCIS JOURNALS

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

WILEY-BLACKWELL JOURNALS

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

FREE MEDICAL JOURNALS

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

7.9 Video Conferencing Facility

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

TECHNICAL JOURNAL

Technical Journal is a quarterly publication of UET Taxila recognized by HEC in “Y” category. It is being published regularly with a key objective to provide the visionary wisdom to academia and researchers to disseminate novel knowledge and technology for the benefit of society. Technical Journal is indexed with well recognized following international databases:

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

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

Office Bearer of Technical Journal Editorial Office:

1. Prof. Hafiz Adnan Habib, Chief Editor
2. Asif Ali, Editor/Secretary Editorial Board

3. Faisal Shahzad, Assistant Editor
4. Engr. Tasawer Khan, OJMS Coordinator
5. Khalil Ahmed, Composer

8 Network Administration And Research Center (NARC)

Network Administration and Research Center (NARC) was founded to provide better support and services to the University. NARC is an outcome of University Computerization and Network Enhancement 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 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 semester projects and final year projects is provided free of cost to the students. Moreover technical guidance is also provided to them. NARC hosted the 17th International Conference on Microelectronics (ICM'05) held in December 2005 and ICOCN-07(International Conference on Optical Communication and Networks).

NARC has executed Smart and Safe Campus project, in collaboration with HEC and Huawei. This project provides,

- Wi-Fi blanket coverage
- Intelligent Video Surveillance (IVS) services
- All the departmental buildings, Hostels, Cafes and Parking Areas are provided Wi-Fi hotspot services.
- Users can enjoy Wireless roaming services throughout the campus.
- After execution of this project UET Taxila has a total Internet bandwidth of 913 Mbps through PERN while an additional 100 Mbps is provided by PTCL as part of their MoU for 4G wireless services.
- All the buildings as well as boundary areas are covered by IP-based video cameras.
- The data generated by cameras will be stored locally at UET Taxila as well as at HEC Data Center Islamabad.
- Moreover, EDURoam (Educational Roaming) service is being provided with this project. UET Taxila Users can use their local domain username/ passwords to connect with IT services at any institute including HEC within Pakistan as well as abroad.
- NARC has also launched the following systems
 - Learning Management System (LMS)
 - Technical Journal
 - Complaint Management System and Faculty Management System.

9

Directorate of Advanced Studies, Research and Technological Development (ASR&TD)

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.
- e. Approve thesis titles, supervisors and examiners.
- f. Co-ordinate the split PhD program with foreign

universities and Government of Pakistan. 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.
- 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



10 Directorate of Students Affairs

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

- Quaid-e-Azam Debating Society (QDS)
- University Art and Culture Society (UACS)
- An-Nisa Girls Scholars Society
- UET Adventure Club
- Environmental & Horticultural Society
- Rashid Cheema, Helath & Blood Donor Society (RCHBDS)
- Al-Mohandis Literary Society
- Character Building Society
- Students Counseling and Guidance Bureau
- UET Media Club
- National Youth Assembly as Student Society
- Disaster & Crises Management Cell
- Umeed-e-Subh: Student Welfare Society
- Social Entrepreneurship Society

Technical Societies*

S.N.	Faculty	Dept.	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

S.N.	Faculty	Dept.	Society
2	Faculty of Telecom & Information Engineering	Computer	Taxilian Robotics & Automation Club (TRAC)
		Software	SOFTDESK
		Telecom	Society of Telecom Engineers & Professionals (STEP)
		Computer Science	COMPTECH Society
3	Faculty of Civil & Environmental Engineering	Civil	Society for Traffic & Road Safety (STARS)
			Institute of Civil Engineers (ICE)
4	Faculty of Mechanical & Aeronautical Engineering	Machanical	American Society of Heating Refrigerating & Air Conditioning Engineers (ASHRAE)
			Institute of Mechanical Engineers (IMECHE)
			American Society of Mechanical Engineers (ASME)
5	Faculty of Industrial Engineering	Industrial	Industrial Institute of Industrial Engineers (IIE)

11 Directorate of Sports

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.

12 Halls of Residences

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

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

A separate hall for international students has been approved and is under construction.

Another Hall for female students is also being constructed. 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.

13 Estate Office

The University Campus spreads over 163 acres of land, and requires considerable efforts to keep the gardens, lawns, roadside rows of trees and flowerbeds 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.

14 Transport

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.



15 Dues/Scholarship Section

This section deals with all kinds of fee/dues, scholarships, 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 scholarships/stipends are available for the University Students.

List of Scholarships/Stipends

Sr.	Nature of Scholarships/ Stipends	Funding Agencies / Departments / Donors
1	University Merit Scholarship	UET, Taxila
2	University Welfare Scholarship	UET, Taxila
3	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-UI-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 Financial Assistance	Concerned Donors, Agencies & Corporations etc.
27	Scholarships For Needy Students	Saudi Arabian Center (IEP-SAC)

16 Health Facilities

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

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



17 Admission/Registration Office

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.

18 Placement Office

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

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

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

1. Career Advisory Group (CAG)
2. Career Counseling (One-to-One/Group)
3. Resume and Cover Letter Assistance
4. Workshop for Resume writing/skills
5. Interviewing Skills
6. Internship Guidelines
7. Job Search Strategies
8. Letter of Recommendations
9. Career - Development Seminars

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

Facilitating fresh graduates of all degree programs of the university in finding their dream jobs and helps pursuits for lucrative career opportunities for

the alumni. So it serves as a platform for linkage of academia and industry and bridges the gap, thus making it possible for real-time industrial input in the engineering curricula.

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

- A meeting place to the Institute's senior students and their prospective employers.
- An effective platform for industry-university interaction.
- An opportunity for the industry representatives to acquaint themselves with the academic environment provided to the students.
- Witness Final Year/Term Projects' exhibition
- Interview/evaluate graduating students for employment
- Visit lab facilities
- Discussion for industrial problems with faculty members of various disciplines
- Right possibilities of industry-academia collaboration

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

It also provides information to the students about the recent jobs and scholarships available by displaying the information on the official notice boards frequently. Students get to know the different areas where they can grow as engineers and enhance their natural and technical skills which they developed during their stay as students in the University. It frequently arranges visits of the prospective employers and their discussion with faculty members

and students of relevant departments regarding the emerging need and training of the students in the same direction. The placement office facilitates various organizations in the process of pre-selection of students who are about to complete their studies by arranging tests and interviews of prospecting candidates for placement in the industry. As a result, the Placement Office maintains a mailing list of major companies employing engineers who are constantly informed about the graduating classes at appropriate time.

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

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

International Linkages

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

The Directorate of International Linkages (IL) expands the international scope of the University by developing official agreements with universities abroad. International linkages build knowledge and shape new schools of thought and discovery. In addition to this we are increasing the number of exchange institutions and expanding into new

countries so that opportunities for connections

continue to grow in order to facilitate the exchange of students and faculty.

International Linkages advances internationalization at UETT by:

- Growing the number of UETT students to study abroad and international students to study at UETT;
- Facilitating faculty exchanges both here and abroad for collaborative research and professional development; and
- Providing weekly opportunities for campus- and local-community members to learn about the hottest topics on the global stage today.

Taking Benefit of International Linkages

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

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

UETT currently has signed MOUs with the following universities:

Europe

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

Africa

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

Technology, Egypt

Asia and Asia Pacific

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

International Alumni

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

19 Planning and Development Cell

The Planning and Development Directorate is the backbone of the University which plays a vital role in its growth and development. The directorate is majorly responsible for arranging of funds for execution to strengthen and promote developmental activities and human resource development at various departments of University. The key functions of the directorate include preparation, approval and execution of infrastructure development projects with the coordination of planning and development wing of Higher Education Commission, Islamabad. Furthermore, Monitoring and follow-up of all development projects are conducted with the collaboration of Monitoring and Evaluation wing of HEC in order to ensure the smooth implementation of the projects..

Infrastructure Development Projects

a. Ongoing Projects

Following infrastructure development projects are

running at Main campus and sub campus Chakwal:

1. Commencement of 4 years undergraduate Program in Water Resource Engineering & Petroleum Engineering at UET Taxila
2. Strengthening and Up Gradation of UET Taxila and its Sub Campus

b. Project submitted for Approval to PHEC

PC-1 of the project titled “Establishment of Sub Campus of UET Taxila at Pind Dadan Khan District Jhelum” is submitted to Punjab Higher Education Department Government of Punjab in order to promote the quality education and provide access to higher education to the local youth those from disadvantaged backgrounds.

20 Quality Enhancement Cell

The Quality Enhancement Cell was established at UET Taxila in February 2011 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 where most of our efforts needs to be focused. This is the only way to achieve value addition, international competitiveness and consequently, socio-economic upgradation. 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. External Members from other Universities have been included in AT.

All programs being offered at UET Taxila have been accredited by regulatory agencies.

Outcome Based Education (OBE)

University of Engineering and Technology, Taxila has adopted the outcome based education system. Now all the undergraduate programs are OBE based and SARs have been submitted to PEC accordingly.

Various trainings have been arranged for the benefit of faculty and students.

SAR Status

As per revised HEC guidelines, program wise SAR have been initiated for the followings programs:

Software Engineering -	B.Sc., M.Sc., PhD
Computer Engineering -	B.Sc., M.Sc., PhD
Telecom Engineering -	B.Sc., M.Sc., PhD
Mechanical Engineering -	M.Sc., PhD
Electrical Engineering -	M.Sc., PhD
Industrial Engineering -	B.Sc.
Electronics Engineering -	B.Sc.

Memberships

UET Taxila is member of Asia Pacific Quality Network (APQN).

Establishment of QEC's at Affiliates

To improve quality of education and monitor academic pursuit of the affiliated institutes, QEC's were established in 2014 at these institutes. SAR process has also been initiated and APCOMS, CASE, and KICSIT have submitted their SARs to UET, Taxila for review.



RULES & REGULATIONS



21 Teaching and Examinations

Mission

To meet the requirements of HEC and PEC up to the level of satisfaction with accuracy, transparency and confidentiality within desired time.

Values

- Impartiality
- Integrity
- Accuracy
- Transparency
- Credibility
- Secrecy

Objectives

- To implement reliable and credible examination system
- To establish error free examination system
- To maintain high level quality standards
- To make the announcements of results automated and create user friendly environment

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 under graduate degree Programmes of the University and will be 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 has not completed minimum degree requirements 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” means separate Theory or Practical part of a subject.
- x. “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.
- xi. “Credit Hour” means 1 hour of theory lecture or 3 hours of practical work in a course per week for the semester.
- xii. “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.
- xiii. “Dean” means the Dean of the concerned Faculty.
- xiv. “Department” means an Academic Department of the University.
- xv. “End Semester Examination” means the examination to be held at the end of each semester separately for theory & practical part on such dates as the University may determine.
- xvi. “External Examiner” means a person holding suitable qualifications in relevant discipline who is neither a teacher in the University nor has taught the subject to the class/section during the semester for which the examination is being held.
- xvii. “Faculty” means the concerned Faculty of the University.

- xviii. "Grade" means the letter grade earned by a student in theory & practical part of a course separately depending on his performance in that course.
- xix. "Grade Points" means the points (numerical value) associated with each letter grade.
- xx. "Internal Examiner" means the teacher/person appointed by the Competent Authority who has been teaching the subject to the class/section during the semester for which the examination is being conducted.
- xxi. "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.
- xxii. "Neutral Examiner" means a teacher of the University holding suitable qualification in the relevant discipline who has not taught the subject to the class/section during the semester for which the examination is being held.
- xxiii. "Practical Part" means the Laboratory part of the subject as prescribed in the detailed syllabi approved by the competent authority, whose successful completion shall be the requirement of the Degree.
- xxiv. "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.
- xxv. "Semester" means a declared duration of 18-20 weeks in case of regular semester and 9-10 weeks in case of optional summer semester, including teaching and examinations.
- xxvi. "Semester Grade Point Average (SGPA)" means the credit-hour weighted average of the Grade Points earned for all the courses in a semester.
- xxvii. "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.
- xxviii. "Syndicate" means the Syndicate of the University.
- xxix. "Theory Part" means the theoretical part of the subject as prescribed in the detailed syllabi approved by the competent authority, whose successful completion shall be the requirement of the Degree.
- xxx. "University" means the University of Engineering and Technology Taxila.
- xxxi. "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 (Chakwal Campus)
- 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. In case of regular semesters (i.e. Fall and Spring) there shall be sixteen weeks of teaching while in case of Summer semester, there shall be 8 weeks of teaching. The breakup of a complete academic year will be as under:

Fall Semester	
Teaching	8 weeks
Mid Semester Exam	1 week
Mid Semester Break	1 week
Teaching	8 weeks
End Semester Exam (Theory + Practical)	3 weeks
Semester Break	1 week
Spring Semester	
Teaching	8 weeks
Mid Semester Exam	1 week
Mid Semester Break	1 week
Teaching	8 weeks
End Semester Exam (Theory + Practical)	3 weeks
Summer Vacations / Summer Semester	9 weeks
Total for a complete year	52 weeks

The Director Academics shall prepare the academic schedule of complete year in consultation with Chairmen of academic departments, Controller of Examinations, Director Student Affairs and Director Sports and shall notify this after approval from Vice-Chancellor in the meeting of Dean's committee. The academic schedule will include the following:

- i. Semester registration date
- ii. Semester starting date
- iii. Mid semester examination week
- iv. 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. Duration of the Degree Programme:

- 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.
- 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 (by migration or transfer of credits), he shall not be admitted to an examination after the expiry of the remaining period for the session to which he is admitted.

b. Credit Hours for the Award of Degree:

- 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 (exclusive of additional courses). 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.

c. Minimum CGPA for the Award of Degree:

- A minimum CGPA of 2.0/4.0 for the total passed 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.

d. Medium of Instructions:

- 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.

e. Repeating and Improvement of Courses:

- An academically deficient student, either regular or casual, shall be allowed to repeat/improve the courses during the summer semester, if possible to offer, as well as during the regular semesters whenever the teaching and examination schedule makes it possible for him to register himself for the additional courses with junior classes and to take the mid and end semester examinations.
- A student shall be allowed to repeat a maximum six courses to improve the grades during the entire degree program.
- 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. C-, D & F).

f. Registration of Additional Semester Courses:

- An academically deficient regular student shall be allowed to get himself registered for as many additional courses with junior classes, such that his total semester loading does not exceed 24 contact hours per week. Similarly an academically deficient casual student will be allowed to get himself registered for as many courses in his post eighth semester such that his total semester loading does not exceed 24 contact hours per week.

(1 Credit Hour of Theory = 1 Contact Hour)

(1 Credit Hour of Lab. = 3 Contact Hours)

g. Summer Semester:

- i. Summer semester shall be primarily for those students who want to repeat / improve certain courses to make up for their academic deficiencies.
- ii. An academically deficient student, either regular or casual, shall be allowed to get himself registered for maximum of 24 contact hours per week (if possible to offer) in an optional summer semester.
- iii. The minimum strength to offer a course in Summer Semester will be Five (05) students. However, the competent authority may relax the condition of five (05) students on the recommendations of the Chairman of the concerned Academic Department only for graduating and casual students.
- iv. Teaching Shall be mandatory for all offered courses in summer semester.
- v. 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 regular (Fall or Spring) semester.
- vi. Letter Grade awarded during summer semester shall not be more than a "B" grade. Also no "I" grade will be awarded in summer semester.
- vii. The registration, attendance, conduct of examination and result display policies etc. during the summer semester shall be same as in regular semester.
- viii. It shall be in the best interest of the students to clear their failed courses or the courses where they want 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 fulfilled.

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 admission office.

- a. The registration of the students for each semester shall be completed ten (10) days prior to the start of the semester by the chairman of the academic departments 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. 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 two weeks.
- b. In case of a regular semester, if a student fails to register himself / herself for cogent reasons, a fine of Rs. 100/- per day will be charged till the first day of the commencement of classes. After that, his name will be removed from the rolls of the university and he will have to pay the readmission fee and fine before he is readmitted. Application to this affect shall be submitted to the concerned Dean of Faculty.
- c. If a student fails to get registered for a regular semester, till one month after start of semester, he will be treated as suspended from University. The suspension can be lifted by the orders of the VC only along with re-admission fee and fine.
- d. For above both cases (b & c) the student will not claim any other relaxation in the rules governing for teaching, attendance and examinations etc.

Part-III. ATTENDANCE REQUIREMENTS

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

- a. He has been on the rolls of the University during the semester for which the examination is being held.
- b. He is not debarred from taking the

examination under the University rules and regulations in-force for the time being.

- c. 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 examination 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 whether theory or practical and will have to re-register for that course in the summer semester if offered or in a regular semester (as an additional course) in which the course is being offered.
- e. The course teacher concerned will prepare the attendance record separately for theory and practical courses 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 the Dean of the concerned Faculty 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 practicals conducted by him together with the number of lectures and practicals 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. Theory and practical parts of a subject will be treated as separate courses. It will be mandatory for the student to pass both the parts. Separate grades will be awarded and will

be reflected on the Grade Sheet and Transcript of Awards.

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. 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	D
F	Fail
I	Incomplete

The grade points assigned to 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
D	1.00
C	2.00
C-	1.70
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 /Assessment Type

a. Theory Course

i) Quizzes/Assignments/Projects/ Presentations:

There shall be an appropriate number of quizzes/ assignments/ course project/ presentations etc.

ii) Mid Semester Examination

There shall be one mid semester examination of 1.5 to 2.0 hours duration for each theory course in a semester after eighth week of teaching in case of regular semester and after fourth week in case of summer semester.

iii) End Semester Examination

There shall be separate End-Semester Examination for every subject. The duration of this exam will be 2 to 3 hours covering the entire course at the end of each semester. The examination shall be held in the last 3 weeks of each regular semester and in last one week of summer semester.

Weightage of Evaluation Components/Assessments

The final grades 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/ Assessment Type	Weightage
Quizzes/Assignments/Projects/ Presentations	25%
Mid Semester Examination	25%
End Semester Examination	50%

b. Lab Course:

Weightage of Evaluation Components/Assessments

The final grades 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/ Assessment Type	Weightage
Lab Assignments, Lab Performance, Lab Report, Lab Project, Presentation, Mid Semester Exam	50%
End Semester Viva & Practical	50%

The end semester viva & practical examination will be conducted jointly by the course teacher (i.e. Internal Examiner) and External/Neutral Examiner.

6. Choice in Question Papers

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

7. Absence from Examination

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

8. Maintenance and Display of Sessional Awards

The teacher concerned shall prepare detailed sessional awards. He shall display a copy of the same on the notice board before the start of end semester examination.

9. Showing of Answer Scripts

The marked scripts of each examination component i.e. quizzes, assignments, lab reports, mid and end semester examination 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.

10. Re-mid Examination

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

11. Place, Conduct of Examination and Date Sheet

The Controller of Examinations shall issue the date sheet of theory papers for each mid and end semester examinations. Mid Semester examinations 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. The date sheet for Practical/Viva Voce Examination will be issued by the Chairman of the concerned Department.

12. Paper Setting and Marking of Scripts for Mid and End Semester Examination (Theory Course)

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 sheet.
- 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. After the end semester examination, he shall send the result (hard and soft copies) along with the marked scripts and two (02) sets of question papers of Mid and End Semester examinations

to the Controller of Examinations through the Chairman of the concerned department under the sealed cover. Further, he will display the list of students having 'F' grades in his course on notice board and send the copy of the same to the Academic Cell of the concerned department.

- 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 fifteen (15) days from the date of last paper of end semester theory examination. Chairman of the concerned department will ensure the timely submission of result.

13. Invigilation/Centre Staff

The Controller of Examinations shall notify the invigilation/center staff for the conduction of mid and end semester examinations on the recommendations of the Chairmen of the departments and duly approved by the competent authority according to the set rules depending upon the number of students appearing in the examination.

14. Appointment of Examiners for Lab Course

The Internal and External/Neutral Examiners for lab course shall be appointed by the Vice Chancellor on the recommendations of the Boards of Undergraduate Studies of the Departments which shall recommend internal examiners and a panel of External/Neutral examiners to the Controller of Examinations.

The end semester viva and practical examination shall be conducted jointly by the Internal and External/Neutral Examiners. The Internal Examiner will prepare the result and shall submit the same to the Controller of Examinations through the Chairmen of the concerned departments under sealed cover.

15. Summer Internship

Every student shall be required to participate in

a six to eight weeks of practical training Program during the summer of their second or third year and submit a formal report to the Chairman of the Department.

16. Final Year Project

In the final year, students shall be required to do a project which is assigned 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 nominated by the Chairman of the Department including the project supervisor 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.

17. 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 permission of the Vice-Chancellor on the recommendations of the Departmental Semester Committee.

18. Notification of Result

As soon as possible after the completion of the examination and submission of awards by the Academic Department the Controller of Examination shall notify the result after scrutiny from the Scrutineers.

19. 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 as mentioned in the attendance sheet..
- 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.

If any discrepancy is found in above cases, then the Controller of Examinations will:

- Case (a): call the superintendent of the concerned examination for clarification/rectification. If the matter is not satisfactory than he will refer the case to Unfair Means Committee.
- Case (b-e): call the concerned course teacher to rectify the mistake, prepare new result and submit the same through Chairman of the concerned department for re-notification.
- Case (f): update and notify the new result.

There shall be no re-evaluation or rechecking of practical examination.

20. 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 at the end of 2nd semester and onwards.

(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 being academically deficient. 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 courses 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.

However the maximum duration of degree program shall remain the same which will be considered from the date of his first semester registration.

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. However the maximum duration of degree program shall remain the same which will be considered from the date of his first semester registration.

21. 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(s) the recommendation of DSC will be forwarded to CoE for its notification. 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.

22. Repeating Courses / Improving Grades

- a) If a student registers himself for improvement of a course and completes it, the better grade obtained by him shall be considered for the computation of CGPA.
- b) 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 elective course in which he failed, both the courses alongwith grades will be reflected on his transcript.

23. 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.

In case of freezing two consecutive semesters the student on his return will be registered in the same semester with next junior class 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 Educational Exchange Programs, will be eligible 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 additional courses) are fulfilled as prescribed in the prevailing regulations. The maximum duration of the degree programme shall remain the same which will be counted from the date of his first semester registration including the frozen semesters.

24. 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 (C-, D grades) 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.

25. 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 in case of Engineering disciplines and from other concerned accredited bodies in case of non engineering disciplines.
- 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 of the concerned department.
- Transferred credits shall not be included in CGPA calculation however, will be reflected on the transcript as Transferred Credits.

26. 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 at the scale of 4.00 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.

27. 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.
- f) He has not availed the facility of freezing of semester(s) during the entire degree programme.

28. 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 best performance on the basis of combined eight semester examinations result in each discipline as detailed below:

1. **University Gold Medal**
For obtaining 1st Position in a degree programme
2. **University Silver Medal**
For obtaining 2nd Position in a degree programme
3. **University Bronze Medal**
For obtaining 3rd Position in a degree programme
4. **Donor Gold Medals**
For obtaining 1st position in a degree programme and as per requirements of the Donors.
5. **University Gold Medal for Best Researcher**
A Gold Medal to best researcher amongst the undergraduate students of the University will be awarded with the below mentioned terms and conditions.
 - i. The Candidate who fulfills all the requirements for the award of degree with Honors.
 - ii. The candidate who successfully publishes a research paper in ISI indexed Impact Factor research publication.
 - iii. The Candidate whose nomination is made by the Research Evaluation Committee constituted for this purpose by the worthy Vice Chancellor.

29. Semester Grade Sheet

The semester grade sheet (SGS) will be provided at the end of each semester after the result notification. The prescribed fee will be charged at the start of each semester along with other semester fee. The SGS shall indicate Courses along with Letter Grades, Grade Points, SGPA, and CGPA.

30. Transcript of Awards

A Transcript of Awards shall be issued to each student after completion of the degree programme subject to the payment of prescribed fee and clearance certificate. However on the request of the student, an incomplete Transcript of Awards can be issued on the payment of prescribed fee.

31. Provisional Certificate

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

32. 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.

33. 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.

34. 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

35. Other Fees

a)	Semester Examination Fee	Rs. 1000/- per semester
b)	Summer Semester Registration Fee	Rs. 1000/- 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

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 refunded in any case.

36. Disposal of Marked Answer Scripts

The marked answer scripts of a particular mid and end semester examinations shall be retained in the office of the Controller of Examinations for a period of one Year. After this period, the scripts shall be disposed off accordingly.

37. Departmental Semester Committee**a. 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.

b. Functions of the Committee

- Address and recommend solutions to student's complaints/appeals regarding sessional/ grade awards.
- Examine & recommend students requests for award of 'I' grade, and retake of mid semester examination.
- Examine & recommend students requests for freezing of semester.
- Examine & recommend students requests for willing relegation to lower semesters only for the purpose of overcoming their academic deficiencies.
- Examine & recommend transferred courses and corresponding credits for migration cases.
- Examine & recommend deficit courses for the student who freezes his two consecutive semesters and the curriculum of next session has been changed.

Recommendations of the DSC will be approved by the Dean of relevant faculty and will be notified by the controller of examinations.

38. University Semester Committee**a. Constitution of the Committee**

There shall be a university semester committee to be constituted by the Vice-Chancellor. The Committee shall consist of the following:

- i) The Deans of all Faculties (Senior Dean being the Chair)
- ii) The Director Quality Enhancement.
- iii) The Director, Academics
- iv) The Controller of Examinations (Secretary)

b. Functions of the Committee

- i. Provide consultation to the Academic Departments in all academic related matters and faculty development for the latest knowledge and technology.
- ii. Monitor the implementation of semester system and address various issues arising

with relation to its implementation.

- iii. Recommend necessary amendments in the semester rules & regulations, if needed.

39. Unfair Means Committee

a. Constitution of the Committee

The Vice-Chancellor shall appoint a committee comprising of the following:

- i. Chairman of Committee of Professor rank
- ii. Three members from the faculty of Professor/ Associate Professor rank
- iii. COE (Member/Secretary)

The meeting of the committee may be convened having quorum of at least three members including COE.

b. Functions of the Committee

The committee will function according to the approved unfair means "Rules and regulations.

- 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 Migration

- 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.
- 22.7 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.

23 Students Discipline Rules

- 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 University 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 a 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 class room, 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 23I(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 immoderated 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 transport unauthorisedly; or
- (13) Shows immodest/indecent or contra-Islamic behavior with fellow boy/girl student.
- i. (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 In-charge
(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/-	Lab Engineer/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 “Lab Engineer/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 officer who imposed the penalty.
In case the student is not satisfied with his decision/ revision he may appeal to the Chairman, 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 the ground 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. The Vice-Chancellor or any teacher or officer to whom the Vice-Chancellor may delegate his powers, may direct a student to pay compensation for any loss, or damage to 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/compensation be 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

24 University Hostels

- 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 student involved in any act of misconduct, indiscipline, violation of rules or involvement in any political and objectionable activities, shall be ineligible for 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 prohibited 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 Sep)
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 cancellation of hostel allotment.

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.

25 Allotment of Rooms in Hostels

- 25.1 A student seeking accommodation in a University Hostel shall submit an application to the Senior Warden on the prescribed form.



26 University Dress Code

The students shall wear dress that ensures modesty, sobriety and dignity. The dress must neither be offensive to social norms and ethical values of the society nor injurious to feminine grace and gentleness. Female students shall, preferably, wear a scarf and an overall sufficient to conceal their posture

27 Miscellaneous

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 PROCEDURES



28 General Instructions

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

29 Eligibility For Admission

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.

S#	HSSC Combination	Eligible Disciplines
1.	Math, Physics and Chemistry	All programs of university
2.	Math, Physics and Computer Science	Computer Engg, Software Engg, Telecommunication Engg, and Computer Science
3.	Math, Physics and Statistics	Computer Science

2. He should have passed the examination (up to the latest annual examination) on the basis of which he seeks admission.
3. He should have obtained at least 60% unadjusted marks in examination on the basis of which he seeks admission. However for admission in BS Computer Science the candidate having 45% marks will also be eligible. Marks of NCC and Hifz-e-Quran,

where applicable, shall be added only for determination of merit and not towards eligibility. Rounding off percentage figure to make it 60% will not be considered towards eligibility.

4. He should be a bonafide resident of the area from where he seeks admission.
5. He should meet standards of physique and eyesight laid down in the medical certificate.
6. 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) FSc. (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,
Plot No. 25, Street No. 39, G-10/4,
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. Rounding off percentage figure to make it 60% will not be considered towards eligibility.

- 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
- Diploma in Radar Technology
- Diploma in Automation Technology
- Diploma in Radio Technology
- Diploma in Instrumentation and Process control Technology

Electronic 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
- Diploma in Radar Technology
- Diploma in Automation Technology
- Diploma in Radio 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
- Diploma in Mechanical (Construction

Machinery) 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
- Diploma in Mechanical (Construction Machinery) Technology
- Diploma in Automation 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
- Diploma in Radar Technology
- Diploma in Radio Technology
- Diploma in Instrumentation and Process control 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
- Diploma in Radar Technology
- Diploma in Automation Technology
- Diploma in Radio Technology
- Diploma in Instrumentation/ Instrumentation and Process control 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
- Diploma in Radar Technology
- Diploma in Automation Technology
- Diploma in Radio Technology

- Diploma in Instrumentation and Process control 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.

- For admission to the BSc courses in any engineering discipline, an applicant must have passed the BSc Examination with Physics and Mathematics.

- 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 Examination.
- To be eligible for admission on the basis of BSc degree the candidate must have obtained at least 60% marks both in FSc and BSc.

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.



30 Seats Allocation Chart

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

Categories		Civil	Mechanical	Electrical	Computer	Software	Telecom	Electronics	Industrial	Environmental	Computer Science	Total
A	Punjab	120	120	110	80	80	65	33	33	33	50	724
*B	Sind	1	1	1								3
*C	Balochistan	2	2	2								6
*D	Khyber Pakhtunkhwa	1	1	1								3
E	Azad Kashmir & Gilgit Baltistan											
(i)	Azad Kashmir	2	2	1								5
(ii)	Kel Areas	1										1
(iii)	Gilgit Baltistan	2	2	2	1	2	3		1			13
F	HEC Nominees from Balochistan & FATA	4	4	4	2	2	2	1	1	1		21
G	Disable Persons					2						2
H	Foreign Nationals											
(i)	Foreign Countries Nominees	3	3	3								9
(ii)	Afghan Nominee	1										1
(iii)	Bangladesh Nominees	1	1	1								3
(iv)	Indian Held Kashmir Nominees	4	2	2	1							9
(v)	Muslim Nominee from Sri Lanka (Distt. Kandy)			1								1
(vi)	Afghan Nominees (PM Directive)	5	5	5	5							20
(vii)	Gambian Nominees	1	1	1	2	1		1	1			8
I	Diploma of Associate Engineer	3	3	3	2	2	2	1	1	1		18
J	Children of Armed Forces Personnel											
(i)	ARMY	1	2	1								4
(ii)	AIR FORCE		1									1
(iii)	NAVY			1								1
K	FATA (Federally Administered Tribal Areas)	1	1	1	1	1	1	1		1		8
**L	Backward Areas	1		1								2
M	Children of Univ. Employees	Maximum 5 Seats in One Discipline										25
N	Children of Graduate Engr./Architects/City & Regional Planners	1	1	1								3
O	Children of University Alumni			1								1
Q1	Tribal Areas of DG Khan			1								1
Q2	Tribal Areas of Rajanpur	1										1
T	Tehsil Taxila		1	1								2
X	Overseas Pakistanis	4	4	4	7	9	5	2	3	3		41
Grand Total												937

*Reciprocal Basis

**Following Backward districts 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 District

SEATS ALLOCATION CHART – (SUB-CAMPUS, CHAKWAL)

Categories		Electronic	Mechatronics	Total
W	Punjab	31	31	62
S	Chakwal Domicile	2	2	4
P	Tribal Areas of DG Khan	1	1	2
R	Federally Administered Tribal Areas	2	2	4
Y	Gilgit Baltistan	2	2	4
Z	Children of Overseas Pakistanis	1	1	2
I(1)	Diploma of Associate Engineer	1	1	2
Total				80

31 Categories and Symbols

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 7 days before date of closing of admission. Unfilled seats (if any) will be cancelled after the prescribed date for receipt of nominations. Nominations and allocation of disciplines are made by the Department of Education, Government of 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 (Disable 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 Nationals)

1. The applicants from category (i) to (v) are required to get their applications sponsored by their government, and sent in triplicate to the Ministry of Finance, Revenue, Economic, Statistics and Privatization (Economic Affairs Division) Government of Pakistan, Islamabad, through Pakistan's representative accredited to their 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 Affairs (Economic Affairs Division) Islamabad**. The prescribed application forms may be obtained from the ministry.
2. The applicants of category (vi) to (vii) are required to submit their applications through HEC Islamabad, Pakistan.
3. 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 as per following details. The selection is made by the university according to merit.

1. The 7 seats allocated before 1993 (at the time of inception of the university) shall be meant for the employees appointed

before 1993 for the programs being offered at that time. If those seats are not filled due to the unavailability of ward of any employee of said category the seats shall be open for admission of wards of employees after establishment of the university in the year 1993.

2. The seats allocated after the inception of the university shall be open for all the employees.
3. 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) Diploma holders will only be considered if any of the seats is vacant of 2 % quota as fixed by PEC in the same order of preference as mentioned above.
- ii) 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.
- iii) Candidates once admitted in previous 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 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 Coordination Officer Dera Ghazi Khan verifying that he 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 Areas 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 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 Areas 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 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.

31.20 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 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

32 Determination of Merit

Punjab Board of Technical Education, Lahore. Selection and allotment of disciplines are made according to merit.

- Note:** Only one F-I is required for both campuses i.e. Main Campus Taxila and Sub-Campus Chakwal. The applicant should precisely and carefully 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:

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

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

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 even if a seat falls vacant in any discipline. Applicant desiring to freeze category / discipline must have to apply in person on the prescribed form for this purpose 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 :

$$[70 \times (\text{HSSC marks obtained} + \text{NCC} + \text{HIFZ-E-QURAN}) / (\text{HSSC total marks})] + [30 \times (\text{Entry Test marks obtained} / \text{Entry Test total marks})]$$
Example

An applicant who has obtained 848/1100 in HSSC and 300/400 in Entry Test. He has obtained Hafiz - E - Quran Certificate as well.

$$\% \text{ Admission Marks} = [70 \times (848 + 20) / (1100)]$$

$$+[30 \times (300/400)] = 77.736 \%$$

CASE 2:

Applicants having BSc or BASc as the highest qualification

Formula:

$$[35 \times (\text{HSSC marks obtained} / \text{HSSC total marks})] + [35 \times (\text{BSc marks obtained} + \text{NCC} + \text{HIFZ-E-QURAN}) / (\text{BSc total marks})] + [30 \times (\text{Entry Test marks obtained} / \text{Entry Test total marks})]$$

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:

$$\% \text{ Admission Marks} = [35 \times (820/1100)] + [35 \times (624 + 20) / (800)] + [30 \times (360/400)] = 81.265\%$$

CASE 3:

Applicants having Diploma of Associate Engineer as the highest qualification

Formula :

$$[70 \times (\text{Diploma marks obtained} + \text{NCC} + \text{HIFZ-E-QURAN}) / (\text{Diploma total marks})] + [30 \times (\text{Entry Test marks obtained} / \text{Entry Test total marks})]$$

Example

An applicant 2570/3100 in Diploma and 240/400 in Entry Test. He has obtained NCC Certificate as well.

% Admission Marks =

$$[70 \times (2570 + 20) / (3100)] + [30 \times (240/400)] = 76.483 \%$$

33**MERIT POSITON ENTRY – 2017****Main Campus UET, Taxila**

Sr.#	Department	A Open Merit	G Disable Persons	L Backward Areas	O Alumni	I Diploma Holders	N Engineer's Children	Q-1 DG-Khan (Tribal)	Q-2 Rajanpur (Tribal)	T Tehsil Taxila	X Overseas
1.	Mechanical	73.109				69.755	67.545			76.498	67.023
2.	Civil	71.200		72.095		68.486	75.175		50.273		62.475
3	Electrical	69.711		72.832	68.764	66.958	69.293	57.936		70.934	64.668
4	Software	68.434	63.498			64.208					52.686
5.	Electronic	67.220				66.176					56.155
6.	Computer	63.948				64.140					50.093
7.	Industrial	62.234				68.017					53.832
8.	Telecom	61.825				65.152					47.984
9.	Environmental	55.707				65.950					50.17
10	Computer Sc.	62.116									

Sub-Campus Chakwal

Sr.#	Department	W Open Merit	I-1 Diploma Holders	S Chakwal District	P DG-Khan (Tribal)	Z Overseas
1.	Electronics	49.150	61.781	58.780	52.682	57.943
2.	Mechatronics	48.484	66.370	68.073	51.700	53.564

34 Domicile Requirements

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 from admissions.uettaxila.edu.pk) from the head of his department affirming that he is a permanent resident of the Punjab. It shall be necessary in such cases that the period of the applicant's study corresponds with the period of the posting of the parent in that province.
- b. **Others**
Applicants other than those at 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 from 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 under taking from the candidate on Form F-IV. (can be downloaded from 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 will have to submit with his application a certificate from the GOC of the area regarding the place of his parent's posting.

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.
- f. Entry Test result.

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 photocopy of 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 submit in 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.

36 How to Complete the Application Form (F-I)

Only online filled application Forms will be accepted. A candidate can fill the application form (F-I), available online at:

admissions.uettaxila.edu.pk

While filling the FORM (F-I) please read the following instructions carefully:

Instructions for Online Filling of Application 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/BY POST** in Admission Office, UET Taxila.
 - After filling the Application Form online according to the given instructions, applicant will get its printout, sign it and attach requisite documents, along with the Declaration Form-(F-0, available in the Prospectus) and then submit **BY HAND/BY POST** 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 'Disciplines' 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	Computer Sc

Chakwal Campus

Electronics 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.

36.6 Deadline for Receipt of Applications

The application form complete in all respects along with the requisite documents should be submitted Personally (BY HAND/BY POST) 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.

37 Procedure for the Selected Candidates

37.1 Notification of Selection

A list of selectees will be displayed on official University website (admissions.uettaxila.edu.pk). The applicants can check the merit lists according to the schedule given in Section 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 (admissions.uettaxila.edu.pk), a selectee is required to pay the university dues and submit the following documents to the Convener, Admission Committee.

- Bank Challan receipt in support of the University Dues deposited in the Habib Bank Ltd., Engineering University Branch Taxila
- 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 of. Original Marks Sheet of Entry Test
- g. Original NCC certificate
- h. Original Domicile certificate
- i. Attested copy of National ID Card/Form B
- j. Bio-Data Sheet (F-VI) duly completed
- k. Undertaking (F-VII) on a Stamp Paper of Rs. 50/-

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.

38 Fees and Other Charges

- 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
	(In Pak. Rupees)	(In Pak. Rupees)
Non-Recurring (Payable at the time of admission)		
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	30000	120000
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	2500	2500
Bus Fare for Non-Resident	8000	8000
Stationery Charges	100	100

- 38.2 For Examination Fees, see the relevant section.

- 38.3 i) The University also grants fee concession on merit as well as need basis.
- ii) Students should maintain their own personal record of original receipts of dues till clearance to avoid problems in future. Non production of original Dues receipts on demand can be considered as non deposit of fee
- iii) All the admitted students are advised to open their bank accounts in Habib Bank Limited at University of Engineering & Technology Taxila branch.

- 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 30 days beyond the schedule of the dues circulated by Dues & Scholarship Section. He / she may also allow the payment of dues in TWO installments. The remission of late fee fine or re-admission fee cannot be waived off if extension is not allowed by Dean beyond the extension period. However the Competent Authority can waive-off late fee fine, on the provision of special case.
- 38.5 University dues received in favor of students under loan scheme of National Bank of Pakistan will be adjusted against his / her outstanding dues. In case, the university has extended fee concession to a student, the same will not be withdrawn. The amount equal to fee concession will be paid to the concerned student to enable them to return the amount to NBP themselves to reduce their loan liability.
- 38.6 Financial assistance / Scholarship received from UET or any other agency/ organization, the fee will be adjusted for his / her outstanding dues. The amount will not be refunded to the student. In case he/she has already been granted Half/ Full fee concession for the said period, it will stand 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 (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 mess security will be refunded when a student leaves the university or the hostel, after deduction of outstanding dues of the university, subject to the submission of clearance, completed in all respects.
- The refundable university security, library security and hostel security, however, shall stand forfeited if a student withdraws from or leaves the university before completing the first year.

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.

SUB CAMPUS CHAKWAL UET TAXILA





39 Introduction

Campus Director
Prof. Dr. Amir Sultan

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, twelve sessions have been enrolled in Electronics and Mechatronics engineering. Annual intake in each discipline is 40.

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., Balkasar and Kallar Kahar. The main campus is under construction near the Balkasar 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 Programs

The sub-Campus Chakwal of UET Taxila offers four years under graduate programs in Electronics Engineering and Mechatronics Engineering . The Engineering Programs are accredited by Pakistan Engineering Council (PEC).

Future Plan

UET Taxila, sub-camups Chakwal is planning to add

more disciplines at Balkasar where 950 kanal land is already acquired for this purpose. Construction of new academic block is in progress at Balkasar.

Hostel Facility

Limited hostel accommodation is available at sub-campus for male students only. Accommodation to all male students of 1st year will be provided by the university, however only limited accommodation will be available on merit for other students. A casual student or a student involved in any act of misconduct, indiscipline, violation of rules or involvement in any political and objectionable activities shall be ineligible for 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. Allotment of rooms in hostel and other rules are followed as per main campus rules.

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.

SERVICES AND COMMON FACILITIES

Accounts/Establishment

Mr. Muhammad Furqan (MBA H&R)
(Assistant Registrar)

This section of the Campus is providing all the account and establishment facilities to the students, staff and faculty. All of the accounts activities of the Campus are managed with in campus under the supervision of Assistant Registrar

Examinations

Mr. Muhammad Azam (MBA)
(Assistant Controller)

Examination Department is responsible for conduction of semester examination and all other issues related to examination.

Internet Services

Mr. Aamir Hussain (MSCS, CCNA, CCNP, MCITP, MCTS, CCAI) (Network Administrator)

In campus more than 400 network/internet users are provided with the facility of internet and LAN services through Ethernet and Wi-Fi connectivity. There is dedicated link of 12 mbps through PERN connectivity provided by HEC for internet services of the campus. Also a backup link of 8 mbps from PTCL is available to give un-interrupted services of internet to the

students, staff and faculty.

Health

Dr. Anjum Qadeer (MBBS)

The Campus provides free medical facilities to the students, staff and faculty. A visiting MBBS Doctor is available for routine medical checkup, to deal in case of any emergency and other medical matters.

Library

Mr. Hassan Yousaf (MA Library Sciences)
(Librarian)

The Library has a number of books of scientific and technical serials on diverse fields. Besides engineering subjects, considerable reading material on humanities, social sciences and Islamic Studies is available. The members can borrow books and other materials, (except serials, reference or reserved books) for specific periods.

Transport

Engr. Shahbaz Ahmed (M.Sc Engg.)
(Transport Officer)

There is one Bus, Van and Hiace is available to provide transport facilities for students, staff and faculty.

Sports

Mr. Muhammad Azam
(Convener Sports Committee)

The Campus provides facilities to the students for participation in games and sports, both outdoors and indoors. A Campus Sports Committee comprising University staff, teachers and students supervises the sports activities. Facilities are provided for all the major sports including cricket, hockey, football, tennis, badminton, basketball, squash and athletics. Outstanding sportsmen are encouraged to takepart in the above stated games. The exercise facilities are provided in the Gym in the evening. Major types of fitness and exercise machines are available in the Campus.

Director Student Affairs

Dr. Muhammad Abdul Basit (PhD)

The primary function of the directorate is to organize extra curricular activities of the students and to foster their intellectual, literary, and artistic potentials, which remain untapped in the classroom. There are different clubs and societies which are devoted for sports or cultural and artistic activities. 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 clubs and societies at Sub-Campus Chakwal are functioning:

- Arts and Cultural Society
- Campus Sports committee
- Environment Protection Society
- Mechatronics Club
- Media Club
- Electrominds
- Editorial Board

Building & Works

Engr. Muhammad Tahir Ali
(Project Director)

Engr. Muhammad Aubaid Asaad
(Asstt. Engineer)

Mr. Muhammad Saleem
(Overseer)

B & W section provides all kind of building and works issues including sanitation, gardening facilities to the Campus.

Security

Mr. Muhammad Furqan
(Security Officer)

Round the clock security is provided in campus by university’s own security guards. There are twenty security guards (including armed guards) for the safety of students, staff and faculty.

Student Section

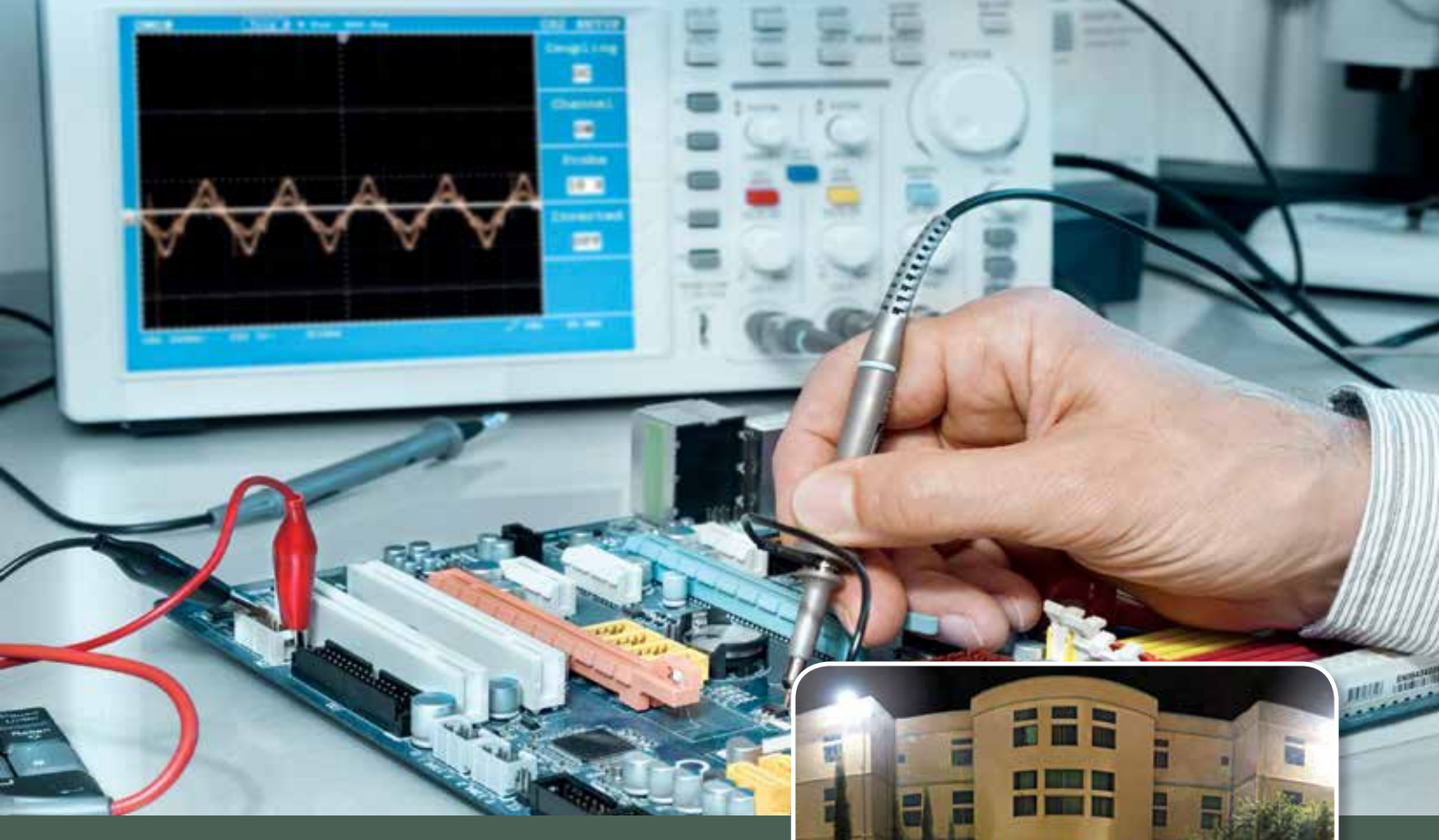
Mr. Junaid Jabbar
(Assistant)

Student Section of the Campus provides all kinds of services related to the student matters like fee issues, refunding of security fee and clearance at the completion of degree.

Important Contact Numbers

Campus Director:	0543-602004
PA to Campus Director Office:	0543-602003
Director Office:	0543-602003
Chairman Mechatronics:	0543-540625
Chairman Electronics:	0543-551278
DSA:	0543-554850
Examination	0543-550903





DEPARTMENT OF ELECTRONICS ENGINEERING

Chairman

Dr. Muhammad Abdul Basit

Assistant Professors

Dr. Muhammad Abdul Basit

BSc Engg (Fast NU Islamabad)

MSc Engg (UET Taxila)

PhD Engg (UESTC China)

Engr. Ahmad Umar Niazi

BSc Engg (UET Lahore)

MSc Engg (UET Taxila)

Dr. Furqan Shaukat

BSc Engg (UET Lahore)

MSc Engg (UET Taxila)

PhD (UET Taxila)

Engr. Hammad Zaki

BSc (DCET Karachi)

MSc Engg (UET Taxila)

(on Higher Studies abroad)

Engr. Muhammad Usman

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

Dr. Khawaja Shafiq Haider

BSc Engg (DCET Karachi)

MSc Engg (NUST Islamabad)

PhD (NUST Islamabad)

Dr. Akhtar Rasool

BSc Engg (UET Lahore)

MSc Engg (DU Sweden)

PhD (SABANCCI Turkey)

Dr. Muhammad Laiq Ur Rahman Shahid

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

PhD(JU Germany)

Lecturers

Engr. Faisal Masood

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Dr. Haq Nawaz

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)
PhD (SABANCCI Turkey)

Engr. Sadaqat Ali

BSc Engg (IUT Dhaka)
MSc Engg (UET Taxila)

Engr. Muhammad Tahir Iqbal

BSc Engg (COMSATS Abbottabad)
MSc Engg (UET Taxila)

Lab Engineers

Engr. Safia Bibi

BSc Engg (UET Taxila)
MSc Engg (UET Taxila)

Engr. Muhammad Tahir Khan

BSc Engg (IIU Islamabad)
MSc Engg (HITEC Taxila)

The Department

Electronics Engineering is one of the major fields in industry. It finds vast range of applications. At sub campus Chakwal, we offer BSc. degree in Electronics Engineering. The Department has eleven full time Faculty members and around 153 Students enrolled. Eight batches of Department have passed out and the program is PEC accredited. We have well equipped laboratories of Electronics, Computer Systems, Embedded Systems, Communication Systems, Circuits & Measurements, Electrical Machines and ASIC Design & DSP lab. The Department has established Industrial Linkages to Support its students for their projects, internships and jobs.

Implementation of Outcome Based Education (OBE) System

HEC, PEC and numerous educational institutions of Pakistan are currently moving towards OBE in view of its relative points of interest over the traditional education framework. OBE emphasizes the accomplishment of the student outcomes and in this way enhances the quality of education and will carry it at standard with global standards. Outcome based educational technique has been implemented in educational frameworks around the globe, from essential to advanced education levels. Accreditation bodies like 'Accreditation Board for Engineering and Technology (ABET)' and Washington Accord both acknowledge OBE as the main teaching approach. As most Pakistani engineering programs are planning to get the OBE accreditation from Washington Accord, it is the need of the day to build up an exhaustive comprehension of this new standard in Pakistan and be on the forefronts of this change procedure.

The Electronics Engineering department of UET Taxila sub campus Chakwal was assigned the task to shift to outcome based education system (OBE) in accordance

with Washington Accord. The implementation has carried out according to the guidelines of Pakistan Engineering Council (PEC) OBA manual 2014

PEOs of Department of Electronics Engineering

The PEOs were shared with the stakeholders i.e. alumni, employer and industrial reps to get their feedback and were revised as per suggestions. The revised PEOs and consistency were again discussed in the academic council meeting.

Following are the PEOs of Department of Electronics Engineering sub campus Chakwal:

- PEO-1:** To produce employable engineers having broad and in depth knowledge who are capable of analyzing and designing engineering solutions.
- PEO-2:** To produce graduates committed to research and lifelong learning with effective contribution towards society and the environment.
- PEO-3:** To produce ethical professionals with sound leadership, entrepreneurial and communication skills.

Laboratories

Electronics Lab

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 Electronics Engineering, Electronic Circuit Design, Integrated Electronics, Power Electronics and other related courses.

(Lab Director: Engr. Muhammad Usman)

Circuits and Instrumentation Lab

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.

(Lab Director: Dr. Khawaja Shafiq Haider)

Embedded Systems Lab

The Laboratory covers the courses like Digital Logic Design, Microprocessors and Microcontrollers and other related subjects. The lab includes Arduino Training Kits, Microcontroller Trainers of PIC & 8051 and other test equipment.

(Lab Director: Engr. Tahir Iqbal)

Computer Lab

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.

(Lab Director: Dr. Furqan Shaukat)

Communication Systems Lab

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.

(Lab Director: Dr. Muhammad Abdul Basit)

Research Lab

The Electronics Research Laboratory specializes in electronic and computerized measurement methods. The main emphasis is to develop methods suitable for the needs of the industry.

(Lab Director: Engr. Ahmad Umar Niazi)

ASIC Design and DSP Lab

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. The advance equipments of Texas instruments, Analog Devices, Xilinx and National Instruments with 20 new Core i7 computers having Mentor Graphics are available in the laboratory.

(Lab. Director: Dr. Laiq ur Rehman Shahid)

Electrical Machines Lab

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 of Labvolts having data acquisition system. 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 .

(Lab. Director: Engr. Faisal Masood)



Courses Under Semester System

BSc Electronics Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab.
BH-111	Functional English	3	0
BH-112	Calculus & Analytical Geometry	3	0
BH-113	Applied Physics	3	1
CS-114	Computer Fundamentals & Programming	2	1
EE-115	Linear Circuit Analysis	3	1
EE-116	Electronics Workbench	0	1
	Total	14	04
	Semester Total	18	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab.
BH-121	Differential Equations	3	0
BH-122	Linear Algebra	3	0
EE-123	Solid-State Electronics	2	0
CS-124	Object Oriented Programming	3	1
EE-125	Electronic Devices & Circuits	3	1
CS-126	Computer-Aided Engineering Design	0	1
	Total	14	03
	Semester Total	17	
	Total for First Year	35	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EE-211	Electronic Circuit Design	3	1
EE-212	Digital Logic Design	3	1
EE-213	Electrical Network Analysis	3	1
BH-214	Complex Variables & Transforms	3	0
EE-215	Instrumentation & Measurements	3	1
	Total	15	4
	Semester Total	19	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EE-221	Integrated Electronics	3	1
EE-222	Microprocessors & Microcontrollers	3	1
EE-223	Electrical Machines	3	1
BH-224	Communication Skills	3	0
EE-225	Electromagnetic Field Theory	3	0
	Total	15	03
	Semester Total	18	
	Total for Second Year	37	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EE-311	Signals & Systems	3	1
EE-312	Power Electronics	3	1
BH-313	Probability & Random Variables	3	0
BH-314	Technical Report Writing & Presentation Skills	3	0
BH-315	Pakistan Studies	2	0
	Total	14	02
	Semester Total	16	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EE-321	Digital Signal Processing	3	1
EE-322	Analog & Digital Communication (IDEE-I)	3	1
EE-323	Control Systems	3	1
BH-324	Islamic Studies	2	0
BH-325	Understanding Psychology & Human Behavior	3	0
	Total	14	03
	Semester Total	17	
	Total for Third Year	33	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
EE-411	Elective-I	3	1
EE-412	Elective-II	3	0/1
ME/MT-413	IDEE-II	3	0/1
BH-414	Engineering Economics	3	0
EE-499A	Electronic Engineering Project	0	3
	Total	12	4/6
	Semester Total	16/18	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab.
MS-421	Engineering Management	3	0
EE-422	Elective-III	3	1
EE-423	Elective-IV	3	0/1
EE-499B	Electronic Engineering Project	0	3
	Total	09	4/5
	Semester Total	13/14	
	Total for Fourth Year	29/32	
	Grand Total for Four Years	134/137	

List of Elective Courses

- BH-XXX Numerical Methods (3+0)
- EE-4XX Microelectronic Technology (3+0)
- EE-4XX VLSI Design (3+1)
- EE-4XX FPGA-Based System Design (3+1)
- EE-4XX Digital System Design (3+1)
- EE-4XX Embedded System Design (3+1)
- EE-4XX Analog & Mixed Signal Design (3+1)
- EE-4XX RF Electronics (3+0)
- EE-4XX Filter Design (3+1)
- EE-4XX Introduction to Nanotechnology (3+0)
- EE-4XX Opto-Electronics (3+0)
- EE-4XX Laser and Fiber Optics (3+0)
- EE-4XX Industrial Electronics (3+1)
- EE-4XX Digital Instrumentation Systems (3+1)
- EE-4XX Mobile Communications (3+0)
- EE-4XX Satellite Communications (3+0)
- EE-4XX Microwave Engineering (3+0)
- EE-4XX Wave Propagation and Antennas (3+1)
- EE-4XX Navigational Aids (3+1)
- EE-4XX Wireless Sensor Networks
- EE-4XX Digital Control Systems (3+1)
- EE-4XX Biomedical Instrumentation (3+1)
- EE-4XX Industrial Automation (3+1)
- EE-4XX Computer Architecture (3+0)
- EE-4XX Computer Networks (3+0)
- EE-4XX Operating System Concepts (3+0)
- EE-4XX Advanced Object Oriented Programming (3+1)
- EE-4XX Introduction to Neural Networks (3+1)
- EE-4XX Fuzzy Logic and simulation (3+0)
- EE-4XX Computer Communication Networks (3+1)
- EE-4XX Artificial Intelligence (3+1)
- EE-4XX Digital Image Processing (3+0)
- EE-4XX Pattern Recognition and Matching (3+0)

List of Interdisciplinary Engineering Electives (IDEE)

- BH-XXX Numerical Methods (3+0)
- EE-4XX Microelectronic Technology (3+0)
- EE-4XX VLSI Design (3+1)
- EE-4XX FPGA-Based System Design (3+1)
- EE-4XX Digital System Design (3+1)
- EE-4XX Embedded System Design (3+1)
- EE-4XX Analog & Mixed Signal Design (3+1)
- EE-4XX RF Electronics (3+0)
- EE-4XX Filter Design (3+1)
- EE-4XX Introduction to Nanotechnology (3+0)
- EE-4XX Opto-Electronics (3+0)
- EE-4XX Laser and Fiber Optics (3+0)
- EE-4XX Industrial Electronics (3+1)
- EE-4XX Digital Instrumentation Systems (3+1)
- EE-4XX Mobile Communications (3+0)
- EE-4XX Satellite Communications (3+0)
- EE-4XX Microwave Engineering (3+0)
- EE-4XX Wave Propagation and Antennas (3+1)
- EE-4XX Navigational Aids (3+1)
- EE-4XX Wireless Sensor Networks
- EE-4XX Digital Control Systems (3+1)
- EE-4XX Biomedical Instrumentation (3+1)
- EE-4XX Industrial Automation (3+1)
- EE-4XX Computer Architecture (3+0)
- EE-4XX Computer Networks (3+0)
- EE-4XX Operating System Concepts (3+0)
- EE-4XX Advanced Object Oriented Programming (3+1)
- EE-4XX Introduction to Neural Networks (3+1)
- EE-4XX Fuzzy Logic and simulation (3+0)
- EE-4XX Computer Communication Networks (3+1)
- EE-4XX Artificial Intelligence (3+1)
- EE-4XX Digital Image Processing (3+0)
- EE-4XX Pattern Recognition and Matching (3+0)



DEPARTMENT OF MECHATRONICS ENGINEERING

Chairman

Prof. Dr. Amir Sultan

Professor

Dr. Amir Sultan

MSc Engg (Sheffield UK)

PhD Engg (UET Taxila)

Assistant Professors

Dr. Shahid Mehmood

MSc Engg (UET Taxila)

PhD Engg (UET Taxila)

Dr. Abdul Mannan

MSc Engg (UET Lahore)

PhD Engg (S.Korea)

Engr. Muhammad Khuram Saleem

BSc Engg (UET Lahore)

MSc Engg (UET Lahore)

(on higher studies abroad)

Engr. Ahmed Nouman

BSc Engg (UET Lahore)

MSc Engg (UET Lahore)

(on higher studies abroad)

Engr. Irfan Azhar

BSc Engg (UET Lahore)

MSc Engg (UET Taxila)

(on higher studies abroad)

Engr. Javed Akhter

BSc Engg (UET Lahore)

MSc Engg (UET Lahore)

(on higher studies abroad)

Dr. Shafiq Ur Rahman

Mphil (QAU Islamabad)

PhD (IIU 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. Shahbaz Ahmad

BSc Engg (UET Taxila)

MSc Engg (UET Taxila)

Engr. Zubair Butt

BSc Engg (UET Lahore)

MSc Engg (UET Taxila)

Lab Engineers**Engr. Arqam Razzaq**

BSc Engg (UET Taxila)

Engr. Bilal Ahmed

BSc Engg (UET Taxila)

Engr. Muhammad Naeem Zafar

BSc Engg (UET Taxila)

The Department

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.

Outcome Based Education System

PEC has attained the status of full signatory of the Washington Accord (WA) of International Engineering Alliance (IEA). Keeping in view of this development Outcome Based Education (OBE) program is started in the Department of Mechatronics Engineering. With the new vision and spirit, the Department of Mechatronics Engineering has transformed its program to Outcome Based Education model, in accordance with Washington Accord.

Program Educational Objectives (PEOs)

The Program Educational Objectives are a set of goals that are to be attained after five years of graduation. The department has defined its educational objectives in line with the university mission and vision. PEOs of the program are as follows:

PEO-1: To produce responsible engineers having good knowledge and skills to solve the core mechatronics engineering problems.

PEO-2: To work in industry in a team with effective communication, leadership qualities as well as high moral & ethical values.

PEO-3: To motivate the graduates toward research & lifelong learning and to endorse them in entrepreneurial activities for the better

socioeconomic impact of the country

Laboratories

CAD and Simulation Lab.

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 like core i7 along with latest LED displays to support the courses like Computer Programming, Computer Aided Design (CAD), Numerical Methods, Modeling and Simulation, Artificial Intelligence and Image Processing.

(Lab Director: Engr. Bushra Nawaz)

Robotics and Automation Lab.

Automation plays a key role in the modern production industries. Industrial Robots, CNC Machines, Programmable Logic Controllers (PLCs) are important constituents of modern manufacturing system. This lab addresses the needs of Mechatronics Engineers. Here, students get hands on experience on PLCs, Industrial Robots and CNC Machines. The lab equipment includes SCARA Robot, Articulated Robot, CNC Machines, Humanoid Robot, Lego Robotic Kits and PLC. The lab has resources for conducting experiments for the subjects of Robotics and Industrial Automation.

(Lab Director: Dr. Abdul Mannan)

Mechanics Lab.

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 projects 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 Worm Wheel Apparatus, Stepped Shaft Apparatus, Friction on Inclined

Plane Apparatus, Hook's law Apparatus, Beam Simple Moment Apparatus, Reaction Apparatus, Shear Apparatus. The lab equipment also includes Universal Rubber 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.

(Lab Director: Dr. Shahid Mehmood)

Instrumentation and Control Lab.

Instrumentation and Control engineering are crucial areas of Mechatronics Engineering. Sensors availability 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 Measurements, Control Systems and Advanced Control Systems. The lab is equipped with Sensor Transducer Kits, Digital Oscilloscope, Magnetic Levitation system, Servo Mechanism Bridges, MIMO Twin Rotor System and Actuators.

(Lab Director: Dr. Abdul Mannan)

Workshop

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 solder different materials. All hand tools required for the practical work in Smithy Shop, Fitting Shop, Electrical, PCB work Shop and Carpentry Shop are available 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.

(Lab Director: Engr. Zubair Butt)

Mechatronics System Design Lab

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, Digital Oscilloscopes, Power Supplies, Function Generators, PIC Training Kits, 8051 Training Kits, Arduino boards, AVR boards, ARM boards, Web CAMs, Motors, Digital Multimeters, Soldering Stations, Breadboards, Various ICs and work benches which provide the students solid platform to construct their projects.

(Lab Director: Engr. Muhammad Asif)

Thermo-Fluids Lab

Thermodynamics and Fluid Mechanics is the basis of Mechatronics Engineering. The purpose of this lab is to provide the students the necessary analytical skills to solve and analyze a variety of Thermodynamics, Fluid Mechanics, and Fluid Power related problems including Hydraulic and Pneumatic systems. By attending the practical sessions and conducting experiments in this lab, the students will learn and understand principles of Thermodynamics, Fluid Mechanics with applications including Hydraulic and Pneumatic systems. Topics include fluid properties, flow types, conservation of energy, flow through pipes, standard symbols, components and control of hydraulic and pneumatic systems. Thermodynamics also includes study of Internal combustion Engines which helps students to identify and investigate the working of different cycles like Otto cycle and Rynkin cycle etc in order to compare the efficiencies of petrol and diesel engines.

(Lab Director: Engr. Shahbaz Ahmad)

Heat Transfer Lab

Heat transfer works at the core of all processes. Its applications range from tiny electronic circuits to large scale industrial plants. The newly developed Heat Transfer lab consists of state of the art apparatuses to demonstrate basic concepts of conduction, convection and radiation as well as their applications including heat exchangers and solar thermal systems.

(Lab Director: Engr. Shahbaz Ahmad)



Courses Under Semester System

BSc Mechatronics Engineering

Semester - I

Course Code	Course Title	Credit Hours	
		Theory	Lab
GS-111	Calculus and Analytical Geometry	3	0
ME-112	Engineering Statics	3	0
HS-113	Communication Skills	2	0
ME-114	Workshop Practice	0	2
EE-115	Electric Circuits Analysis	3	1
HS-116	Islamic Studies	2	0
	Total	13	3
	Semester Total	16	

Semester - II

Course Code	Course Title	Credit Hours	
		Theory	Lab
GS-121	ODE & Linear Algebra	3	0
ME-122	Engineering Drawing	0	2
CS-123	Computer Programming	2	1
GS-124	Applied Physics	3	1
HS-125	Technical Report Writing	2	0
HS-126	Pakistan Studies	2	0
	Total	14	4
	Semester Total	18	
	Total for First Year	34	

Semester - III

Course Code	Course Title	Credit Hours	
		Theory	Lab
GS-211	Vector Calculus	3	0
EE-212	Electronics Devices and Circuits	3	1
ME-213	Engineering Dynamics	3	0
MTE-214	Solid Modelling	0	1
ME-215	Materials and Manufacturing Processes	3	0
CS-216	Data Structures and Object Oriented Programming	3	1
Hs-217	Social Sciences Electives II	2	0
	Total	17	3
	Semester Total	20	

Semester - IV

Course Code	Course Title	Credit Hours	
		Theory	Lab
GS-221	Complex Variables and Transform	3	0
EE-222	Electronic Circuits Design	3	1
EE-223	Signals and Systems	2	0
ME-224	Mechanics of Materials	2	1
CS-225	Digital Logic Design	2	1
MTE-226	Actuating Systems	3	1
	Total	15	4
	Semester Total	19	
	Total for Second Year	39	

Semester - V

Course Code	Course Title	Credit Hours	
		Theory	Lab
GS-311	Probability and Statistics	3	0
MTE-312	Microcontroller and Embedded Systems	2	2
ME-313	Fluid Mechanics	2	1
MTE-314	Instrumentation and Measurement	3	1
ME-315	Theory of Machines	2	1
HS-316	Management Sciences Elective	3	0
	Total	15	5
	Semester Total	20	

Semester - VI

Course Code	Course Title	Credit Hours	
		Theory	Lab
GS-321	Numerical methods	2	0
MTE-322	Mechatronics Systems Design	2	2
MTE-323	Design of Machine Elements	2	0
MTE-324	Engineering Elective I	3	0
MS-325	Modelling and Simulation	3	0
ME-326	Fundamentals of Thermal Sciences	3	1
	Total	15	3
	Semester Total	18	
	Total for Third Year	38	

Semester - VII

Course Code	Course Title	Credit Hours	
		Theory	Lab
MTE-411	Robotics	3	1
MTE-412	Control Systems	3	1
MTE-413	Engineering Elective II	3	0
MS-414	Engineering Economics	3	0
MTE-415-A	Senior Design Project	0	3
	Total	12	5
	Semester Total	17	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Lab
MTE-421	Engineering Elective III	3	0
MTE-422	Industrial Automation	2	1
MTE-415-B	Senior Design Project	0	3
	Total	5	4
	Semester Total	9	
	Total for Fourth Year	26	
	Grand Total for Four Years	137	

ELECTIVES

Social Sciences Elective

1. Professional Ethics
2. Sociology and Development
3. Organizational Behavior
4. Introduction to Philosophy
5. English
6. Or any other relevant course (s)

Management Sciences Elective

1. Engineering Management
2. Total Quality Management (TQM)
3. Entrepreneurship, Leadership and Team Management
4. Principles of Management
5. Research Methodology
6. Knowledge Management
7. Or any other relevant course(s)

Engineering Electives

1. Power Electronics
2. Mechanical Vibrations
3. Special Topics in Mechatronics
4. Digital Signal Processing
5. Digital Control Systems
6. Digital Image Processing
7. Power Plant Systems

8. Introduction to Systems Engineering
9. Machine Vision
10. Artificial Intelligence
11. Precision Manufacturing
12. Energy resources and management
13. Intelligent Systems
14. Computer Aided Engineering
15. Digital Filter Design
16. Advanced Control Systems
17. Mobile Robotics
18. Internal Combustion Engine
19. Automotive Technology
20. Elect Instrumentation
21. Laser and its Applications
22. Condition Monitoring
23. Bio-Mechatronics
24. Data Communications and Networking
25. Fuzzy Logic
26. Applied Robotics
27. Internal Combustion Engines
28. Mechatronics Modeling for Automotive Systems
29. Power Train Systems
30. Embedded Systems
31. Computer Integrated Manufacturing
32. Or any other relevant course (s)



40 Admission Schedule

Submission of Entry Test Forms	11-June-2018
Entry Test Centralized)	15-July-2018
Availability of Undergraduate Prospectus + Admission Form	<p>For updated admission schedule please visit admissions.uettaxila.edu.pk</p>
Last Date of Submission of Admission Form	
Hifz-e-Quran Test	
1 st Merit List on the website	
Last Date Depositing Dues and Original Documents for 1 st Merit List	
2 nd Merit List on the website	
Last Date of Depositing Dues and Original Documents for 2 nd Merit List	
3 rd Merit List on the website	
Last Date Depositing Dues and Original Documents for 3 rd Merit List	
Issuance of Registration No. to admitted students	
Start of 1 st Semester Classes	
Admission Closed	

Note:

- 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 requirements 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 viewed at the official website of the university at:
admissions.uettaxila.edu.pk
- The display of merit lists shall continue till the admission is closed. So keep visiting the University Web site for further merit lists (if any).

41 Admission Committee

Prof. Dr. Muhammad Iram Baig (Convener Admission Committee)	051-9047412
Members	
Engr. Muhammad Kashif Iqbal, Asstt. Professor, MED	051-9047412
Engr. Mansoor Ahmad Balouch (Registrar)	051-9047406
Mr. Ali Hussain Naqvi (Treasurer)	051-9047414
Mr. Nadeem Majeed Choudhary, Asstt. Professor, SED	051-9047740
Malik Intisar Ali Sajjad, Asstt. Professor, EED	051-9047548
Dr. Syed Bilal Ahmad Zaidi, Asstt. Professor, CED	
Engr. Ulfat Hussain, Web Manager, NARC	051-9047466
Admission Staff	
Mr. Muhammad Asghar Mahmood	051-9047412
Mr. Abdul Waheed	
Mr. Usman Khalid Qureshi	
Mr. Ghulam Dastgir	
Hafiz Muammad Shahid	



IMPORTANT NOTICE: ADMISSION POLICY

ADMISSION SCHEDULE

For updated admission schedule please keep visiting
admissions.uettaxila.edu.pk

ELIGIBILITY FOR ADMISSION

The candidate should have obtained at least 60% unadjusted marks in examination 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. Rounding off percentage figure to make it 60% will not be considered towards eligibility. The candidate having 45% marks will be considered for Computer Science only.

PREFERENCE TABLE

Only one F-I is required for all disciplines of Main Campus Taxila and Sub Camups Chakwal. The applicant should precisely and carefully fill the preferences table. The order of preferences once given shall be final and cannot be changed subsequently, after the submission of Application Form in Admission Office.

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.

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.

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.

OUTCOME BASED EDUCATION (OBE)

Outcome Based Education (OBE) is the hallmark of UET Taxila education and following are the Program Learning Outcomes (PLOs) adopted by each academic department of the university:

PLO	Statement	
PLO-1	Engineering Knowledge	Ability to apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
PLO-2	Problem Analysis	Ability to identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
PLO-3	Design and Development of Solutions	Ability to design solutions for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
PLO-4	Investigations	Ability to conduct investigation into complex problems using research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.
PLO-5	Modern Tool Usage	Ability to create, select and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modeling, to complex engineering activities, with an understanding of the limitations.
PLO-6	Engineer and Society	Ability to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.
PLO-7	Environment and Sustainability	Ability to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
PLO-8	Ethics	Ability to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
PLO-9	Individual and Team Work	Ability to communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PLO-10	Communication	Ability to function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.
PLO-11	Project Management	Ability to recognize the need for, and have the preparations and ability to engage in independent and lifelong learning in the broadest context of technological change.
PLO-12	Lifelong Learning	Ability to demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

UNIVERSITY OF ENGINEERING AND TECHNOLOGY TAXILA, PAKISTAN

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