



# VISION

To generate knowledge for  
global competitive advantage  
and become a leading world  
class research university.



# MISSION

To play a leading role as a  
university of engineering and  
trechnology in teaching,  
innovation and  
commercialization that is  
internationally relevant and  
has a direct bearing on  
national industrial,  
technological and socio-  
economic development.



**MALIK RAFIQUE RAJWANA**

Governor Punjab/ Chancellor  
University of Engineering & Technology, Lahore

## CHANCELLOR'S MESSAGE

The University of Engineering and Technology, Lahore, enjoys a respectable position as a leading institution amongst the reputed engineering universities of the world. Being a pioneering institution of engineering and technology in Pakistan, it cherishes a rich tradition of imparting quality engineering and technical education to the best brains of the country.

It is indeed a matter of great satisfaction for me to note that significant improvement has been achieved in the sphere of engineering and technical education at the University in accordance with national and international standards. With its emphasis on research and applied disciplines relevant to the need of time, the University is certainly alive to the increasing demand of professional and progressive engineering for national development.

It is equally commendable that the University has created a modern infrastructure and has established its sub-campuses at Kala Shah Kaku, Faisalabad, Narowal and a constituent college at Gujranwala to further engineering studies in the country. This has certainly made it possible for students from diverse areas in Punjab to update their knowledge in various technical disciplines since modern technology has become essential for rapid progress.

I am confident that efforts to excel in the field of higher education and the inculcation of technical expertise in the students of the University will continue in future with a greater zeal.

## PRO CHANCELLOR'S MESSAGE

Modern Technology has become a backbone for socio-economic development of any country. Government is taking measures to promote technical and higher education through many effective projects.

Higher education enables the individuals to expand their knowledge and skills, express their thoughts clearly in speech and in writing, grasp abstract concepts and theories, and increase their understanding of the world and their community. In this regard varsities play an active and pivotal role.

University of Engineering and Technology is the pioneering engineering institution of Pakistan with a long history dating back to 1923 when it was upgraded to a College and was subsequently upgraded to a university in 1961. It enjoys the prestige as an engineering institute producing energetic and devoted minds to resolve the issues on scientific grounds. Its alumni are serving in key engineering and technical management positions all around the world.

I believe that UET students are blessed ones who avail the opportunity of getting education from a revered and prestigious university of the country and they will contribute to the field of engineering and technology not only in Pakistan but also abroad.



**SYED RAZA ALI GILLANI**

Minister for Higher Education, Government of Punjab/  
Pro Chancellor University of Engineering & Technology, Lahore





Government is committed to promote education and research to acquire modern skills and proper usage of technologies to boost the economy of Pakistan and to face the challenges of upcoming era

**Chief Minister**



CPEC will be a game changer for national development and provide better job opportunities in the field of engineering and technology.

**Federal Minister for Interior**



## VICE CHANCELLOR'S MESSAGE

I am pleased to state that UET as a premier institution, established in 1921, has now become an icon of quality in engineering education and it is a great honor for me to serve my alma mater. As you know that the vision and mission are realigned recently to promote education, research and innovation which are important for technological development in the country. This has been demonstrated by the alumni who are serving in important national projects (i.e., engineering, design, IT, energy, architecture, planning, R&D and infrastructure), organizations and multinational companies.

The new initiatives are taken for implementation of Outcome Based Education (OBE) to enhance student learning outcomes in their degree programs with emphasis on research, knowledge, skills and values. This will certainly help to produce graduates having advanced knowledge in their fields and humanistic rectitude to be fit to serve for technological progress and to confront social challenges in society.

The faculty has set the quality benchmarks to achieve the milestones and key performance indicators (KPIs) for research, commercialization entrepreneurship and better learning outcomes in all programs. The administration is aware of the challenges and difficulties to overcome and to provide best service to students and faculty and bring harmonization in activities of all departments, centers and hostels. These efforts will lead to improvement in quality of education, services as well as national and international ranking. We are also strengthening our linkages with alumni, industry, Government departments and international partners for academic cooperation.

I would like to congratulate the students selected on merit and for their choice to join UET. They have accepted the challenge to work harder and smarter, to excel in science, technology, research and management programs as well as participation in sports, professional chapter competitions, and co-curricular activities.

I should also take this opportunity to welcome the students especially the new intake at all campuses of UET at the start of academic session and hope that their stay will be pleasant with good learning experience.

# CHANCELLOR'S OFFICE

**A warm welcome to UET, Lahore**

**Pakistan's Oldest Engineering University**



## ADMINISTRATIVE SETUP

Chancellor

MALIK MUHAMMAD RAFIQUE RAJWANA

Governor of Punjab

Pro Chancellor

SYED RAZA ALI GILLANI

Minister for Education (Higher Education)

Vice Chancellor

PROF. DR. FAZAL AHMAD KHALID, SI

Registrar

MUHAMMAD ASIF

Controller Of Examination

MUHAMMAD ZARGHAM NUSRAT

Treasurer

IMRAN BABAR



## DEANS OF FACULTIES

*Faculty of Electrical Engineering*

**PROF. DR. SUHAIL AFTAB QURESHI**

*Faculty of Mechanical Engineering*

**PROF. DR. NADEEM AHMAD MUFTI**

*Faculty of Civil Engineering*

**PROF. DR. ABDUL SATTAR SHAKIR**

*Faculty of Chemical, Metallurgical & Polymer Engineering*

**PROF. DR. NADEEM FEROZE**

*Faculty of Earth Sciences & Engineering*

**PROF. DR. NADEEM FEROZE**

*Faculty of Architecture & Planning*

**PROF. DR. GHULAM ABBAS ANJUM**

*Faculty of Natural Sciences, Humanities & Islamic Studies*

**PROF. DR. MUHAMMAD SHAHID RAFIQUE**





## CHAIRPERSONS/ DIRECTORS OF TEACHING

*Electrical Engineering*

**PROF. DR. TAHIR IZHAR**

*Petroleum and Gas Engineering*

**DR. MUHAMMAD KHURRAM ZAHOR**

*Computer Science and Engineering*

**PROF. DR. MUHAMMAD SHAHBAZ**

*Metallurgical & Materials Engineering*

**PROF. DR. AKHLAQ AHMAD**

*Mechanical Engineering*

**PROF. DR. NASIR HAYAT**

*School of Architecture & Design*

**PROF. DR. GHULAM ABBAS ANJUM**

*Industrial & Manufacturing Engineering*

**PROF. DR. MUHAMMAD PARVEZ MUGHAL**

*Architecture*

**PROF. DR. GHULAM ABBAS ANJUM**

*Mechatronics & Control Engineering*

**PROF. DR. NADEEM AHMAD MUFTI**

*Product & Industrial Design*

**PROF. DR. SABAHAAT ALAMGIR**

*Civil Engineering*

**PROF. DR. HABIB UR RAHMAN**

*City & Regional Planning*

**PROF. DR. RIZWAN HAMEED**

*Institute of Environmental Engineering & Research*

**PROF. DR. SAJJAD H. SHEIKH**

*Physics*

**PROF. DR. ANWAR LATIF**

*Architectural Engineering & Design*

**PROF. DR. MUHAMMAD ARIF KHAN**

*Chemistry*

**PROF. DR. SYEDA RUBINA GILANI**

*Transportation Engineering & Management*

**PROF. DR. AMMAD HASSAN KHAN**

*Mathematics*

**PROF. DR. MUHAMMAD MUSHTAQ**

*Chemical Engineering*

**PROF. DR. ING NAVEED RAMZAN**

*Humanities & Social Sciences*

**PROF. DR. MUHAMMAD SHAHID RAFIQUE**

*Polymer & Process Engineering*

**PROF. DR. ASIF ALI QAISER**

*Islamic Studies*

**DR. IRFAN KHALID DHILLON**

*Department of Mining Engineering*

**DR. ZULFIQAR ALI**

*Institute of Business and Management*

**PROF. DR. MUHAMMAD SHAHID RAFIQUE**

*Department of Geological Engineering*

**DR. MUHAMMAD ZUBAIR ABU BAKAR**



## HEADS OF ADMINISTRATIVE DEPARTMENTS

*Director Research, Innovation and Commercialization*

**PROF. DR. MUHAMMAD TAHIR**

*Director Students Affairs*

**PROF. DR. ASIF ALI QAISER**

*Director Studies*

**PROF. DR. GHULAM ABBAS ANJUM**

*Director International Students Office*

**PROF. DR. MUHAMMAD SALEEM KHAN**

*Senior Warden*

**PROF. DR. NASIR HAYAT**

*Director Students Financial Aid & Career Services*

**PROF. DR. NASEEM ADIL SIDDIQUI**

*Convener Admission Committee/In-charge Students Section*

**PROF. DR. MOHAMMAD ALI MAUD**

*Director, Al-Khawarizmi Institute of Computer Sciences*

**PROF. DR. WAQAR MAHMOOD**

*Focal Person Higher Education Commission*

**PROF. DR. AKHLAQ AHMAD MALIK**

*Director External Linkages*

*Chairman Health Committee*

**PROF. DR. KHALID MAHMOOD UL HASSAN**

*Director Planning and Development*

**DR. MUHAMMAD AZEEM RAZA**

*Chairman Transport Committee*

**PROF. DR. IJAZ AHMAD**

*Project Director Lahore Campus*

**ENGR. ASIF JAH**

*Chairman Library Committee*

**PROF. DR. ASADULLAH QAZI**

*Project Director University City Campus*

**ENGR. ASIF JAH**

*Chairman Proctorial Board*

**PROF. DR. MUHAMMAD SHOAIB**

*Project Director Faisalabad Campus*

**ENGR. ASIF JAH**

*Chairman Sports Committee*

**PROF. DR. NADEEM FEROZE**

*Resident Officer*

**MUHAMMAD ASIF**

*Director Repair and Maintenance Centre*

**PROF. DR. NADEEM AHMAD MUFTI**

*Resident Auditor*

**MUHAMMAD KHALID HANIF KHAN**

*Director Automotive Engineering Centre*

**DR MUHAMMAD MAHMOOD ASLAM BHUTTA**

*Public Relations Officer*

**ALI ASHRAF**

*Director Quality Enhancement Cell*

**DR. AMER AZIZ**



## ACADEMIC CALENDAR (2017-2018)

### Session 2014, 2015 & 2016

#### Fall Semester

Semester Starts	Monday 04 <sup>th</sup> September 2017
Semester Ends (after 16 weeks)	Friday 22 <sup>nd</sup> December 2017
Exam Weeks	Tuesday 26 <sup>th</sup> December 2017 to Friday 5 <sup>th</sup> January 2018
Semester Break	Monday 8 <sup>th</sup> January 2018 to Friday 19 <sup>th</sup> January 2018

#### Spring Semester

Semester Starts	Monday 22 <sup>nd</sup> January 2018
Semester Ends (after 17 weeks)	Friday 18 <sup>th</sup> May 2018
Exam Weeks	Monday 21 <sup>st</sup> May 2018 to Friday 1 <sup>st</sup> June 2018

#### Summer Semester

Taught Summer Semester Starts for Session 2015 and 2016	Monday 2 <sup>nd</sup> July 2018
Guided Study Starts for Sessions 2014	Monday 23 <sup>rd</sup> July 2018
Semester Ends	Friday 24 <sup>th</sup> August 2018

### Session 2017

#### Fall Semester

Semester Starts	Monday 16 <sup>th</sup> October 2017
Semester Ends (after 16 weeks)	Friday 26 <sup>th</sup> January 2018
Exam Week	Monday 29 <sup>th</sup> January 2018 to Friday 2 <sup>nd</sup> February 2018
Semester Break	Monday 5 <sup>th</sup> February 2018 to Friday 9 <sup>th</sup> February 2018

#### Spring Semester

Semester Starts	Monday 12 <sup>th</sup> February 2018
Semester Ends (after 15 weeks)	Friday 25 <sup>th</sup> May 2018
Exam Week	Monday 28 <sup>th</sup> May 2018 to Friday 1 <sup>st</sup> June 2018

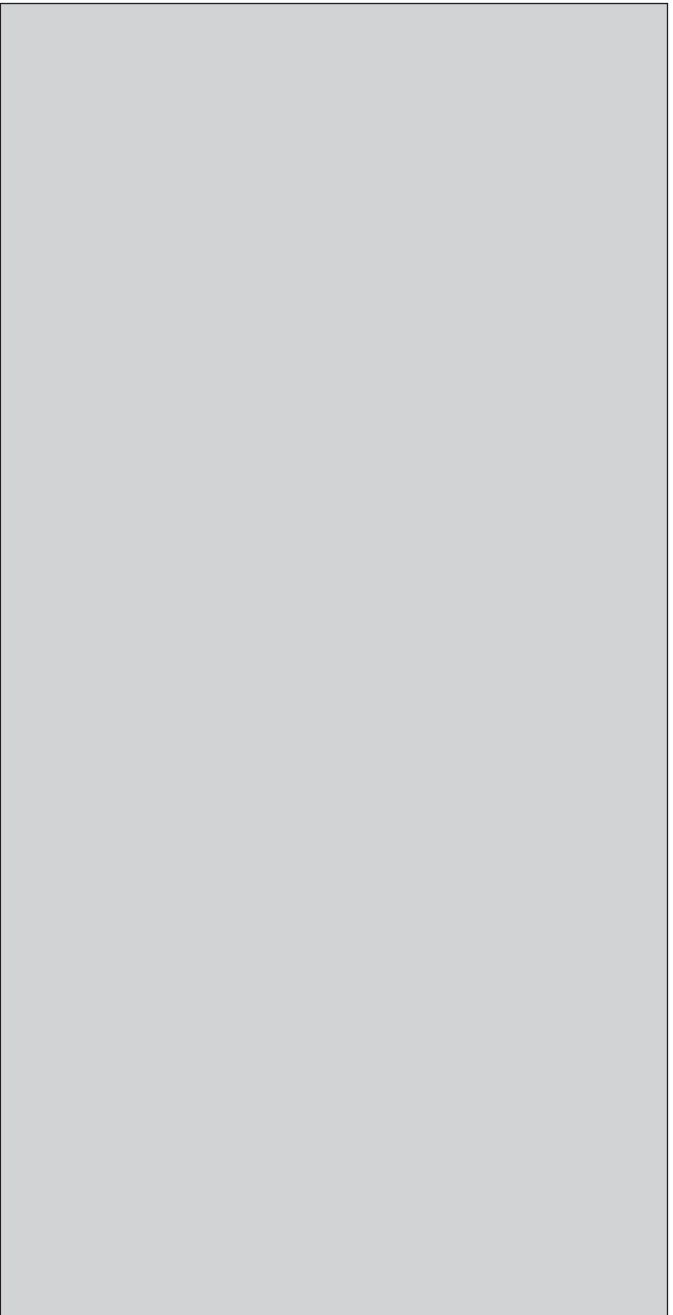
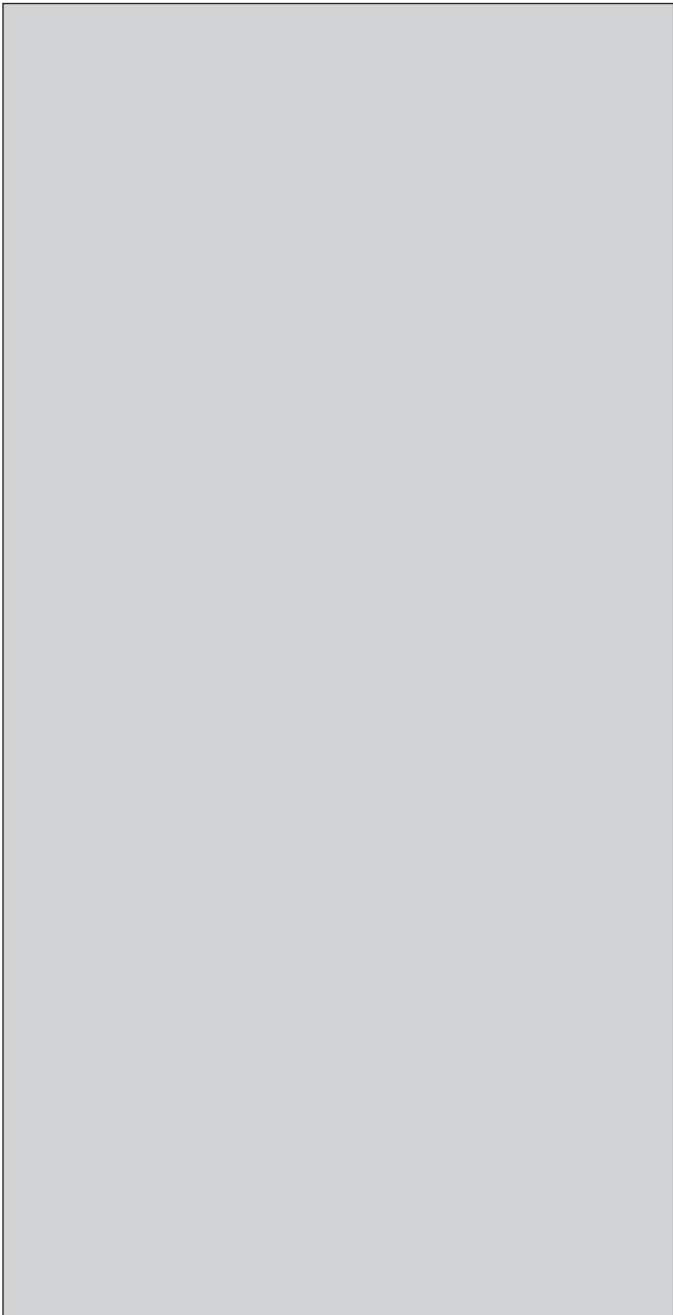
#### Summer Semester

Semester Starts	Monday 2 <sup>nd</sup> July 2018
Semester Ends	Friday 24 <sup>th</sup> August 2018





# C O N T E N T S



# INTRODUCTION



Though this institution received its charter as a University in 1961, it has a much longer history as a distinguished seat of learning in engineering sciences. It started in 1921 as the Mughalpura Technical College, deriving its name from the famous suburb of the old city of Lahore, richly dotted with architectural heritage of the great Mughals including the magnificent Shalimar Gardens. Its more familiar name of the pre-University era, the Maclagan Engineering College, was given to it in 1923 when Sir Edwards Maclagan, the then Governor of the Punjab, laid the foundation stone of the building, now called the Main Block, which still retains its majesty in spite of the wear and tear of over eight decades. At that stage, the institution offered courses of study in two disciplines, namely Electrical and Mechanical Engineering. The year 1932 is a major milestone in the evolution of this institution when it was affiliated with the University of the Punjab for award of a Bachelor's Degree in Engineering. At the dawn of Independence in 1947, it had well-established B.Sc. Degree courses in civil, electrical and mechanical engineering, and the quality of its scholastic standards won it a place of prestige throughout the British India.

In 1954, a Bachelor's Degree course in Mining Engineering, the first-ever of its kind in the country, was started. But its massive expansion and development commenced in 1961

on its transformation into a University. It set for itself a variety of goals, but the first priority was to start teaching of those disciplines which were crucial for national development but were not catered for by any institution in the country. Accordingly, in the sixties, Bachelor's degree courses were started in Chemical Engineering, Petroleum & Gas Engineering, Metallurgical Engineering, Architecture, and City & regional Planning.

Later, the University concentrated its energies and resources on developing its postgraduate programs. By 1970's it had established over a score of graduate programs in diverse specializations of engineering, architecture, planning and allied disciplines. Ph.D. program was also instituted in a number of disciplines. The process of consolidating and strengthening continued to be a major concern of the University, with phenomenal increase in enrollment of students in seventies. Consequently, the University College of Engineering, Taxila was established in 1975. For three years it functioned at Sahiwal and was shifted to its campus at Taxila in 1978. This college has now been upgraded to University of Engineering and Technology, Taxila.

Establishing traditions of research in the engineering and allied disciplines has been a major goal of the University. With this end in view, the University established a Directorate of Research, Extension and Advisory Services which strives for the promotion and organization of research activities.

In the recent past, there has been a substantial rise in students' enrollment and the figure has now gone up to over 11500. Currently, 2484 students are pursuing postgraduate studies. The number of female students enrolling for different disciplines is ever on the increase, and is 2293 at present. The number of foreign students coming from countries, like Iran, Jordan, Kuwait, Kenya, Nepal, Saudi Arabia, Iraq, Bangladesh and Sri Lanka is over 332 which gives the University Campus a cosmopolitan character.



The university has 818 teachers of which 270 have a Ph.D. while 250 are pursuing Ph.D. abroad.

The teaching departments of the University are grouped into the following seven faculties:

- Faculty of Electrical Engineering
- Faculty of Mechanical Engineering
- Faculty of Civil Engineering
- Faculty of Architecture & Planning
- Faculty of Chemical, Metallurgical and Polymer Engineering
- Faculty of Natural Sciences, Humanities and Islamic Studies
- Faculty of Earth Sciences and Engineering

The university set up a campus at Faisalabad in 2006 and also established a campus at Kala Shah Kaku in 2007, which is known as University City Campus. Rachna College of Engineering & Technology, Gujranwala is a constituent college and follows the same academic curriculum and policies as the ones followed at the main campus in Lahore. In 2012, the university established a new campus in Narowal with an aim to produce quality technical manpower for the District of Narowal and its surroundings. In addition to managing its own campus, the University controls the academic programs and examinations of numerous institutions which are affiliated to it for award of degrees.

## UNDERGRADUATE DEGREE PROGRAMS AT UET

### 1. Degree Programs at Main Campus

Bachelor of Science (B.Sc.) degree is offered in the following disciplines:

- a) Electrical Engineering
- b) Computer Engineering
- c) Computer Science
- d) Mechanical Engineering
- e) Mechatronics and Control Engineering
- f) Industrial and Manufacturing Engineering
- g) Civil Engineering
- h) Environmental Engineering
- i) Transportation Engineering
- j) Architectural Engineering

- k) Chemical Engineering
- l) Polymer Engineering
- m) Mining Engineering
- n) Geological Engineering
- o) Petroleum and Gas Engineering
- p) Metallurgical and Materials Engineering
- q) City and Regional Planning (Morning and Evening)

### Bachelor's Degree is offered in the following disciplines:

- a) Architecture
- b) Product and Industrial Design
- c) Business Administration

### 2. Degree Programs at City Campus Kala Shah Kaku (KSK)

Bachelor of Science (B.Sc.) degree is offered in the following disciplines:

- a) Electrical Engineering
- b) Mechanical Engineering
- c) Chemical Engineering
- d) Biomedical Engineering
- e) Computer Science
- f) Electrical Engineering Technology
- g) Mechanical Engineering Technology
- h) Chemical Engineering Technology
- i) Biomedical Engineering Technology

### 3. Degree Programs at Faisalabad Campus

Bachelor of Science (B.Sc.) degree is offered in the following disciplines:

- a) Electrical Engineering
- b) Mechatronics & Control Engineering
- c) Chemical Engineering
- d) Textile Engineering

### 4. Degree Programs at Rachna College of Engineering & Technology Gujranwala

Bachelor of Science (B.Sc.) degree is offered in the following disciplines:

- a) Electrical Engineering
- b) Mechanical Engineering
- c) Industrial & Manufacturing Engineering
- d) Computer Science

### 5. Degree Programs at Narowal Campus

Bachelor of Science (B.Sc.) degree is offered in the following disciplines:

- a) Electrical Engineering
- b) Mechanical Engineering
- c) Civil Engineering
- d) Civil Engineering Technology
- e) Computer Science

## AFFILIATED INSTITUTIONS & PROGRAMS OFFERED

### 1. NFC Institute of Engineering and Fertilizer Research Faisalabad

- a) B.Sc. Electrical Engineering
- b) B.Sc. Mechanical Engineering
- c) B.Sc. Chemical Engineering
- d) B.Sc. Civil Engineering
- e) B.Sc. (Hons) Computer Science
- f) Bachelor of Business Administration
- g) M.Sc. Chemical Engineering
- h) B.Sc. Electrical Engineering Technology
- i) B.Sc. Mechanical Engineering Technology
- j) B.Sc. Civil Engineering Technology

### 2. Swedish College of Engineering & Technology, Rahim Yar Khan

- a) B.Sc. Mechanical Engineering
- b) B.Sc. Civil Engineering

### 3. Government College of Technology, Railway Road, Lahore

- B.Sc. Mechanical Engineering Technology

### 4. Government College of Technology, Faisalabad

- B.Sc. Electrical Engineering Technology

### 5. Government College of Technology, Rasul

- B.Sc. Civil Engineering Technology

### 6. Sharif College of Engineering & Technology, Raiwind Road, Lahore

- a) B.Sc. Electrical Engineering

- b) B.Sc. Chemical Engineering
- c) B.Sc. (Hons) Computer Science

### 7. Dr. A. Q. Khan Institute of Technology, Mianwali

- a) B.Sc. Mechanical Engineering Technology
- b) B.Sc. Chemical Engineering Technology
- c) B.Sc. Civil Engineering Technology
- d) B.Sc. Electrical Engineering Technology

### 8. Quaid-e-Azam College of Engineering and Technology, Sahiwal

- a) B.Sc. Mechanical Engineering Technology
- b) B.Sc. Civil Engineering Technology
- c) B.Sc. Civil Engineering
- d) B.Sc. Electrical Engineering
- e) B.Sc. Mechanical Engineering

### 9. Sir Syed College of Computer Science, Gulberg, Lahore

- B.Sc.(Hons) Computer Science

### 10. Islam College of Engineering and Management Sciences, Sialkot

- a) B.Sc. Electrical Engineering
- b) B.Sc. Mechanical Engineering

### 11. ATA Institute of Engineering and Technology, Wazirabad

- B.Sc. Electrical Engineering

### 12. Chenab College of Engineering and Technology, Gujranwala

- a) B.Sc. Electrical Engineering
- b) B.Sc. Mechanical Engineering

### 13. Namal College, Mianwali

- a) B.Sc (Hons) Computer Science
- b) B.Sc Electrical Engineering
- c) Bachelor of Business Administration

### 14. Government Swedish Pakistani College of Technology, Gujrat

- B.Sc. Mechanical Engineering Technology

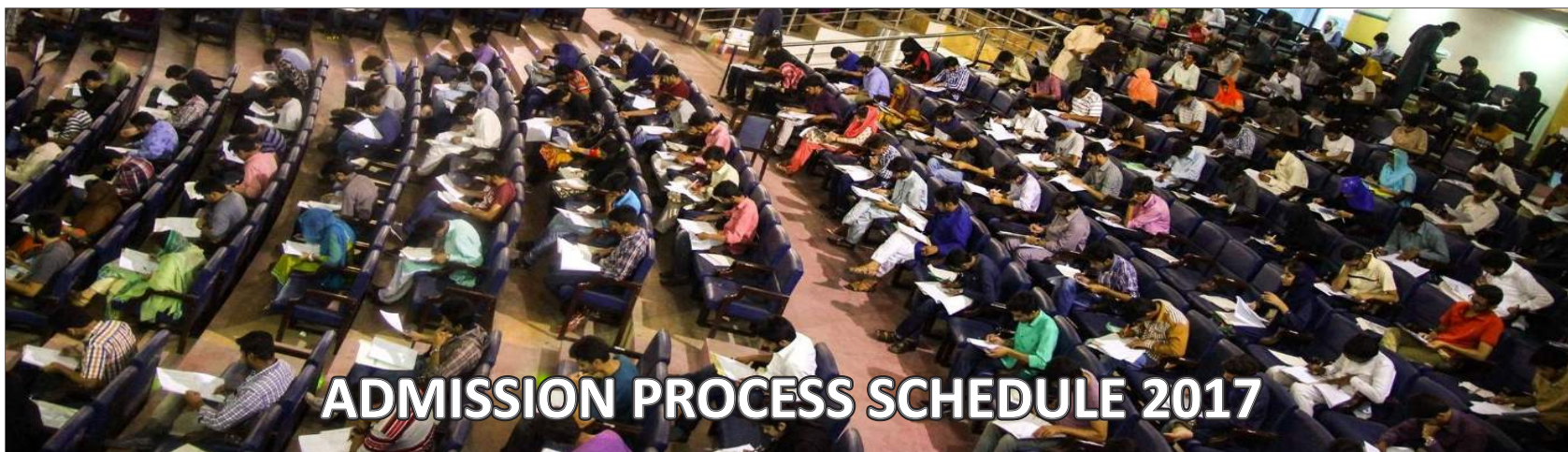






# ADMISSIONS





## ADMISSION PROCESS SCHEDULE 2017

### SCHEDULE 2017

Event	Date	Day	Time
Availability of Under Graduate Prospectus	04-09-2017	Monday	
On-line Filling and Submission of Admission Forms Starts	04-09-2017	Monday	
Last date of Submission of Admission Forms	22-09-2017	Friday	
Hafiz-e-Quran Test      Reporting Time 9:00 A.M.	26-09-2017	Tuesday	9:00 A.M.
Sports Test      Reporting Time 9:00 A.M.	28-09-2017	Thursday	9:00 A.M.
Announcement of 1 <sup>st</sup> Merit List	29-09-2017	Friday	Evening
Last Date of Depositing Dues and Documents for 1 <sup>st</sup> Merit List	9-10-2017	Monday	
Hostel Allotment Starts	9-10-2017	Monday	
Announcement of 2 <sup>nd</sup> Merit List	10-10-2017	Tuesday	Evening
Last Date of Depositing Dues and Documents for 2 <sup>nd</sup> Merit List	13- 10-2017	Friday	
Announcement of 3 <sup>rd</sup> Merit List	16-10-2017	Monday	Evening
<b>Regular Classes Commence</b>	<b>16-10-2017</b>	<b>Monday</b>	
Last Date of Depositing Dues and Documents for 3 <sup>rd</sup> Merit List	19-10-2017	Thursday	
Announcement of 4 <sup>th</sup> Merit List	20-10-2017	Friday	Evening
Last Date of Depositing Dues and Documents for 4 <sup>th</sup> Merit List	26-10-2017	Thursday	
"Request to Shift To Lower Merit Preference" Option Opens	26-10-2017	Thursday	
"Request to Shift To Lower Merit Preference" Option Closes	29-10-2017	Sunday	2:00 pm
Announcement of Merit List of Preference Change Applicants	30-10-2017	Monday	
Allocation of Registration Numbers in Respective departments	30-10-2017	Monday	

## 1. GENERAL INSTRUCTIONS

- Members of the University staff will be available for personal consultation during admission period.
- Try to submit the application along with the required documents as early as possible. Do not wait for the last date.
- As soon as the process of selection is complete, the merit list will be notified showing the percentage aggregate marks of the applicants admitted in different disciplines against different categories.
- All documents to be attached with the application Form-I should be attested by a Class-I gazetted officer of the government or Class-A officer of this University.

## 2. EQUIVALENT EXAMINATIONS

The University recognizes the following examinations as equivalent to the Intermediate (Pre-Engineering) examination with Mathematics, Physics and Chemistry of the Pakistani Boards of Intermediate and Secondary Education:

- Intermediate (Pre-Engineering) Examination of the Board of Intermediate & Secondary Education, Azad Kashmir.
- Cambridge Overseas Higher School Certificate with Physics, Chemistry and Mathematics.
- British General Certificate of Education (Advanced Level) with Physics, Chemistry and Mathematics.
- F.Sc. (Pre-Medical) with Mathematics as an additional subject.
- American High School Graduation Diploma (12th Grade) or equivalent.
- Intermediate (pre-Engineering) of the Agha Khan University Examination Board
- Intermediate (pre-Engineering) of a Higher Education Commission (HEC) recognized/ approved institution.

### 2.1 Equivalence of Certificates Up to Higher Secondary School Certificate (HSSC)/ Intermediate Level

The determination of equivalence and issuance of equivalent marks certificate up to HSSC level for certificates other than those issued by Pakistan's Boards is the jurisdiction of the Inter Board Committee of Chairmen (IBCC) as per decision of the Supreme Court of Pakistan. Such applicants are required to attach an equivalence certificate showing marks with the application for

admission issued by the IBCC. The following are the addresses of the IBCC offices:

- IBCC at FBISE Building, H-8/4, Islamabad
- IBCC Regional Office at BISE Building, 86 Mozang Road, Lahore

## 3. ELIGIBILITY FOR ADMISSION

### 3.1 General Eligibility Requirements

An applicant for admission to any of the Bachelor Degree course offered by the University must fulfill the following requirements:

- He should have obtained at least 60% marks in F.Sc/ ICS/ DAE/ B.Sc./ B.Tech(Pass) examination excluding sports and Hafiz-e-Quran marks.
- In case of a candidate applying on the basis of B.Sc degree, he should have also obtained at least 60% marks in F.Sc/ ICS/ DAE examination.
- He should have appeared in the entry test arranged by this University for that particular academic session in which he seeks admission.
- He should have at least 50% overall adjusted admission marks computed by giving 70% weight to F.Sc./ICS/DAE /B.Sc./ B.Tech(Pass) examination result and 30% to current University Entry Test result.
- He should be a bonafide resident of the area from where he seeks admission
- He should meet standards of physique and eye sight laid down in the medical certificate

### 3.2 Other Eligibility Requirements

An applicant for admission to any of the B.Sc. Engineering Degree Courses, B.Sc. City & Regional Planning (CRP), B.Sc. Computer Science, B.Sc. Engineering Technology, Bachelor's Degrees in Architecture and Product & Industrial Design must fulfill the following eligibility requirements:

- He should have passed the Intermediate (Pre-Engineering) examination with Chemistry, Mathematics and Physics from a Board of Intermediate and Secondary Education of Pakistan or an equivalent examination recognized by the University. However, Intermediate or an equivalent examination with Physics, Mathematics and Computer Science shall be acceptable only for Computer Science, Computer Engineering, City & Regional Planning (CRP), Architecture and Product & Industrial Design.



Science, Computer Engineering, City & Regional Planning (CRP), Architecture and Product & Industrial Design. Intermediate or an equivalent examination with Physics, Mathematics and Statistics shall be acceptable only for admission in Computer Science, City & Regional Planning (CRP), Architecture and Product & Industrial Design.

- b) Candidate with B.Tech(Pass) qualification should have his first diploma, on the basis of which he was admitted in B.Tech. degree course, relevant to the branch of engineering in which he seeks admission.
- c) Candidate with DAE qualification should have their diploma relevant to the branch of engineering in which he seeks admission as explained later in this prospectus.
- d) Candidate with a B.Sc. degree should also have passed F.Sc. (Pre-Engineering or Pre-Medical) examination.

### **3.3 Provisions about Admission on the basis of a B.Sc. 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, subject to fulfilling of General Eligibility Criterion stated in Clause 3.1 and subject to the condition that he has passed F.Sc. Pre-Engineering or F.Sc. Pre-Medical examination.

#### **3.3.1 Scope of Eligibility for B.Sc.'s with F.Sc. (Pre-Engineering)**

- a) For admission to the B.Sc. degree courses in Engineering, Computer Science, City & Regional Planning and Bachelor's degree courses in Architecture and Product & Industrial Design, an applicant must have passed the B.Sc. examination with Physics and Mathematics.
- b) For admission to the B.Sc. Courses in Chemical Engineering, Polymer & Process Engineering, Chemical & Polymer Engineering, Environmental Engineering and Metallurgical & Materials Engineering, an applicant must have passed the B.Sc. Examination with Chemistry.
- c) For admission to B.Sc. Courses in Mining Engineering, Geological Engineering and Petroleum & Gas Engineering, an applicant must have passed B.Sc. examination with TWO of the following subjects: (i) Physics; (ii) Chemistry; (iii) Mathematics; (iv) Geology

#### **3.3.2 Scope of Eligibility for B.Sc's with F.Sc. (Pre-Medical)**

- a) For admission to the B.Sc. degree courses in Engineering, Computer Science, City & Regional Planning and Bachelor's degree courses in Architecture and Product & Industrial Design, an applicant must have passed the B.Sc. examination with Physics and Mathematics.
- b) For admission to the B.Sc. Courses in Chemical Engineering, Polymer & Process Engineering, Chemical & Polymer Engineering, Environmental Engineering and Metallurgical & Materials Engineering, an applicant must have passed the B.Sc. Examination with Mathematics and Chemistry
- c) For admission to the B.Sc. courses in Mining, Geological Engineering and Petroleum & Gas Engineering an applicant must have passed the B.Sc. examination with Mathematics and one of the following subjects: (i) Physics; (ii) Chemistry; (iii) Geology

#### **3.4 Seats for Diploma Holders/B.Tech (Pass) Degree**

- a) For admission against seats reserved for the holders of Diploma of Associate Engineer, the candidate should have passed diploma examination of a Board of Technical Education in the relevant technology
- 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:

##### **● B.Sc. Electrical Engineering**

- o Diploma in Electrical Technology
- o Diploma in Telecommunication Technology
- o Diploma in Electronics Technology
- o Diploma in Avionics Technology
- o Diploma in Instrumentation Technology
- o Diploma in Information Technology
- o Diploma in Precision Mechanical & Instrument Technology

##### **● B.Sc. Mechanical Engineering**

- o Diploma in Mechanical Technology
- o Diploma in Mechanical (Power) Technology
- o Diploma in Mechanical (Production) Technology
- o Diploma in Precision Mechanical & Instruments Technology

- o Diploma in Precision Mechanical & Instruments Technology
- o Diploma in Auto & Diesel Technology
- o Diploma in Bio-Medical Technology
- o Diploma in Dies & Mould Technology
- o Diploma in Automation Technology
- o Diploma in Refrigeration & Air Conditioning Technology
- o Diploma in Mechanical Technology Power (Auto Farm & Machinery Technology)

● **B.Sc. Textile Engineering**

- o Diploma in Textile Technology
- o Diploma in Spinning Technology
- o Diploma in Textile Weaving Technology
- o Diploma in Textile Dying and Printing Technology
- o Diploma in Garments Technology
- o Diploma in Dress Designing & Making Technology
- o Diploma in Textile Spinning Technology

● **B.Sc. Industrial and Manufacturing Engineering**

- o Diploma in Mechanical Technology
- o Diploma in Mechanical (Power) Technology
- o Diploma in Mechanical (Production) Technology
- o Diploma in Precision Mechanical & Instruments Technology
- o Diploma in Auto & Diesel Technology
- o Diploma in Bio-Medical Technology
- o Diploma in Dies & Mould Technology
- o Diploma in Automation Technology
- o Diploma in Refrigeration & Air Conditioning Technology
- o Diploma in Mechanical Technology Power (Auto Farm & Machinery Technology)

● **B.Sc. Mechatronics and Control Engineering**

- o Diploma in Instruments Technology
- o Diploma in Electrical Technology
- o Diploma in Electronics Technology
- o Diploma in Mechanical Technology
- o Diploma in Automation Technology
- o Diploma in Mechatronics Technology

● **B.Sc. Civil Engineering**

- o Diploma in Civil Technology

- o Diploma in Land & Mine Surveying Technology
- o Diploma in Architecture

● **B.Sc. Chemical Engineering**

- o Diploma in Chemical Technology
- o Diploma in Chemical Processing Technology
- o Diploma in Chemical Technology (specialization in Sugar Technology)
- o Diploma in Petro Chemical Technology
- o Diploma in Petroleum Technology

● **B.Sc. Petroleum & Gas Engineering**

- o Diploma in Petroleum Technology
- o Diploma in Chemical Technology
- o Diploma in Petrochemical Technology

● **B.Sc. Metallurgical Engineering and Materials Science**

- o Diploma in Metallurgy & Welding Technology
- o Diploma in Foundry and Pattern Making Technology
- o Diploma in Glass Ceramics Technology
- o Diploma in Mechanical Technology
- o Diploma in Cast Metal & Foundry Technology
- o Diploma in Welding & Sheet Metal Technology
- o Diploma in Welding & Fabrication Technology
- o Diploma in Foundry & Pattern Making Technology

● **B. Architecture**

- o Diploma in Architecture
- o Diploma in Civil Technology
- o Diploma in Land & Mine Surveying

● **B.Sc. Mining Engineering**

- o Diploma in Land and Mine Surveying
- o Diploma in Mining Technology

● **B.Sc. Electrical Engineering Technology**

- o Diploma in Electrical Technology
- o Diploma in Telecommunication Technology
- o Diploma in Electronics Technology
- o Diploma in Avionics Technology
- o Diploma in Instrumentation Technology
- o Diploma in Information Technology
- o Diploma in Precision Mechanical & Instrument

● **B.Sc. Mechanical Engineering Technology**

- o Diploma in Mechanical Technology
- o Diploma in Mechanical (Power) Technology
- o Diploma in Mechanical (Production) Technology
- o Diploma in Precision Mechanical & Instruments Technology
- o Diploma in Auto & Diesel Technology
- o Diploma in Bio-Medical Technology
- o Diploma in Dies & Mould Technology
- o Diploma in Bio-Medical Technology
- o Diploma in Dies & Mould Technology
- o Diploma in Automation Technology
- o Diploma in Refrigeration & Air Conditioning Technology
- o Diploma in Mechanical Technology Power (Auto Farm & Machinery Technology)

● **B.Sc. Biomedical Engineering & Biomedical Engineering Technology**

- o Diploma in Biomedical Technology
- o Diploma in Electrical Technology
- o Diploma in Electronics Technology
- o Diploma in Instrumentation Technology
- o Diploma in Critical Health Care Technology

- c) Applicants seeking admission against seats reserved for the holders of B.Tech.(Pass) degree shall not be eligible for admission to the B.Sc./Bachelor's degree courses mentioned above unless their diploma is in the relevant technology as specified against each degree course as given in clause (b) above

**Explanation**

- A candidate having diploma in any other technology shall not be eligible for admission.
- B.Tech.(Pass) candidate should have his first diploma, on the basis of which he was admitted in B.Tech. degree course, relevant to the branch of engineering in which he seeks admission.

**4. AGE LIMIT**

There is no age restriction for seeking admission to any Bachelor's degree course at the University.

**5. APPLICANT'S GENDER**

Both male and female persons are eligible to apply for all seats.

**1. EXAMINATIONS CONSIDERED FOR MERIT PURPOSE**

For admission to all the Bachelor's Degree Courses and determination of merit the following examinations are considered:

- a) Higher Secondary School Certificate examination (H.S.S.C) Pre-Engineering or equivalent; OR Bachelor of Science (B.Sc.); OR Bachelor of Applied Sciences (B.A.Sc).
- b) For reserved seats only: Diploma of Associate Engineer or Bachelor of Technology (Pass).
- c) Entry Test for Session 2017.



**2. MERIT DETERMINATION**

The comparative merit of applicants will be determined on the basis of overall adjusted admission marks obtained by them in these examinations:

- a) For applicant with H.S.S.C. (Pre Engineering) as the highest qualification:
  - 70% weight - H.S.S.C (Pre-Engg.) or equivalent including Sports and Hafiz-e-Quran marks.
  - 30% weight - Entry test marks.
- b) For applicants with B.Sc. or B.A. Sc. as the highest qualification:
  - 70% weight - B.Sc. or B.A.Sc including Sports and Hafiz-e-Quran marks or H.S.S.C (re-Engg.) or equivalent including Sports and Hafiz-e-Quran marks, in whichever a student has the highest %age.
  - 30% weight - Entry test marks.
- c) For applicants having Diploma of Associate Engineer as the highest qualification (for reserved seats only)
  - 70% weight - Diploma of Associate Engineer including Sports and Hafiz-e-Quran marks.
  - 30% weight - Entry test marks.



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- d) For applicants having B.Tech(Pass) as the highest qualification (for fixed seats only):
  - 70% weight - B.Tech.(Pass) including Sports and Hafiz-e-Quran marks or Diploma of Associate Engineer including Sports and Hafiz-e-Quran marks in whichever an applicant has the highest percentage.
  - 30% weight - Entry test marks.

### 3. MERIT OF F.Sc.'s (PRE-MEDICAL) WITH MATHEMATICS

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

### 4. CREDIT FOR HAFIZ-E-QURAN

Zero to 20 marks will be added to the academic marks in HSSC or equivalent examination of an applicant who is Hafiz-e-Quran. He will get the benefit only if he has:

- Filled in the necessary check box provided in the online application form; and
- Appeared before the "verification committee" appointed by the Vice Chancellor for oral test carrying zero to twenty marks and the Committee has awarded marks according to the degree of his proficiency.

The "Verification Committee" will hold oral test at 09:00 A.M. in UET Lahore on Tuesday 26<sup>th</sup> September 2017. It may be noted that no separate call letters will be issued to the concerned applicants in this connection.

### 5. CREDIT FOR SPORTS

A maximum of ten marks will be added to the academic marks in HSSC or equivalent examination of an applicant who is a sportsman. He will get the benefit only if he has:

- Filled in the necessary check box provided in the on line application form; and
- Appeared before the "verification committee" appointed by the Vice-Chancellor for credit of marks and the Committee will determine his proficiency as a Sportsman according to the following criteria:

- "05 Marks for Physical Test showing actual performance and endurance"
- "01 Marks for Inter College Champion"
- "02 Marks for District Level Champion"
- "03 Marks for Divisional Level"
- "04 Marks for Provincial Level"
- "05 Marks for National Level or under 18 representation abroad"

The "verification committee" will meet, for this purpose, in the office of The Chairman Sports Committee along with Convener Admission Committee will hold sports test at 9:00A.M. on Thursday 28<sup>th</sup> September 2017. It may be noted that no separate call letters will be issued to the concerned applicants in this connection

### 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 places of decimal after truncation), 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 that discipline/category.

### 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 below. The details of the distribution of seats are available in the Seats Allocation Chart. The applicants for each category are grouped separately. Then on the basis of the percentage admission marks, 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.

## 8. TRANSFER ON THE BASIS OF GIVEN PREFERENCES AND MERIT

In case a seat in any discipline/category of applicant's higher preference falls vacant and he is eligible for transfer to that discipline/category on the basis of his merit, he shall be automatically transferred to the discipline/category.

## 9. 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.

## 10. UN-UTILIZED SEATS

If some seats allocated to any category (other than category A) remain un-utilized for lack of adequate applicants, then the un-utilized seats are transferred to category-A and are filled under the same terms and conditions as applicable to the former.

# APPLICATION CATEGORIES AND SYMBOLS

The seats for the Bachelor's degree courses are distributed over different categories. For brevity, these categories are assigned alphabets. The detail is given as under:

Category	Who Can Apply?	How to Apply?
<b>A</b> [Open Merit Seats]	Only Punjab domiciled candidates, having requisite qualification (other than DAE), can apply for open merit seats under 'A' category	Submit application to UET Lahore according to the procedure and requirements laid down in this prospectus. The selection and allocation of disciplines are made by the UET according to merit.
<b>B</b>	The candidate should be a bonafide resident of the Sindh province. Diploma holders are also eligible to apply.	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. Nominations and allocation of disciplines are sent by the Section Officer (ACD-III) Department of Education, Government of Sindh.
<b>C</b>	The candidate should be a bonafide resident of the Baluchistan province. Diploma holders are also eligible to apply.	Applications are to be submitted to the Secretary, Department of Education, Government of Baluchistan. Nominations and allocation of disciplines are made by said Department.
<b>D</b>	The candidate should be a bonafide resident of the Khyber Pakhtunkhwa (KPK) province. Diploma holders may also apply.	Applications are to be submitted to the Registrar, University of Engineering & Technology, Peshawar. Nominations and allocations of disciplines are made by the Department of Higher Education, Government of Khyber Pakhtunkhwa, Peshawar.
<b>E</b> [Azad Kashmir]	The candidate should be national of Azad Kashmir.	The applications are to be submitted to the Secretary Nomination Board, Azad Government of the State Jammu & Kashmir, Education Secretariat (Colleges), New Secretariat Chatter, Muzaffarabad Azad Kashmir.
<b>E</b> [Azad Kashmir (Lip Valley)]	The candidate should be national of Lipa Valley, Azad Kashmir.	The applications are to be submitted to the Secretary Nomination Board, Azad Government of the State Jammu & Kashmir, Education Secretariat (Colleges), New Secretariat Chatter, Muzaffarabad Azad Kashmir.
<b>E</b> [Northern Areas]	The candidate should be bonafide resident of Northern Areas (Gilgit-Baltistan)	The applications are to be submitted to the Secretary Nomination Board/Director of Education, Gilgit-Baltistan. Diploma holders are also eligible to apply.

Category	Who Can Apply?	How to Apply?
<b>H</b> Foreign Countries (Without Financial Support)	The candidates having foreign nationality can apply under 'H' Category. The applicant is required to get his application sponsored by his own government. Diploma holders may also apply.	The application is sent in triplicate to the Ministry of Finance, Revenue, Economic Affairs, Statistics & Privatization (Economic Affairs Division) Government of Pakistan, Islamabad through Pakistan's representative accredited to his country. The nominations are sent by the Section Officer Finance, Revenue, Economic Affairs, Statistics & Privatization (Economic Affairs Division) Government of Pakistan, Islamabad.
<b>H</b> (Afghan Nationals)	The candidates should be Afghan nationals. The applicant is required to get his application sponsored by his government.	The application is sent in triplicate to the Ministry of Inter Provincial Co-ordination, Government of Pakistan, through Pakistan's representative accredited to Afghanistan. The nominations are sent by the Assistant Educational Advisor, Ministry of Inter Provincial Co-ordination, Government of Pakistan, Islamabad.
<b>H</b> (Indian Held Kashmir)	The candidates from Indian Held Kashmir can also apply under 'H' Category.	The application is sent in triplicate to the Ministry of Finance, Revenue, Economic Affairs, Statistics & Privatization (Economic Affairs Division) Government of Pakistan, Islamabad through Pakistan's representative accredited to his country. The nominations are sent by the Section Officer Finance, Revenue, Economic Affairs, Statistics & Privatization (Economic Affairs Division) Government of Pakistan, Islamabad.
<b>H</b> (Cultural Exchange)	The candidates having foreign nationality can apply under 'H' Category. The applicant is required to get his application sponsored by his own government. Diploma holders may also apply.	The application is sent in triplicate to the Ministry of Inter Provincial Coordination Government of Pakistan through Pakistan's representative accredited to his country. The nominations are sent by the Assistant Educational Advisor, Ministry of Inter Provincial Coordination, Government of Pakistan, Islamabad.
<b>I</b>	Punjab domiciled candidates, having passed DAE in relevant field, can apply for reserved seats under 'I' category.	Submit application to UET Lahore according to the procedure and requirements laid down in this prospectus. The selection and allocation of disciplines are made by the UET according to merit.
<b>J</b>	The children of officers/ officials belonging to Army, Air Force or Navy can apply under this category. Diploma holders are also eligible to apply.	Applications are submitted to the Headquarters of either the Army, Air Force, or the Navy (depending upon the service to which the parent belongs to) in accordance with the procedure notified by them. Nominations and allocations of disciplines are made by: <b>For Army Seats :</b> The Adjutant General, AG'S Branch (W & R Directorate), General Headquarter, Rawalpindi. <b>For Air Force Seats:</b> The Deputy Director Education (TRG), Air Headquarter, Peshawar. <b>For Navy Seats:</b> The Director, Directorate of Naval Educational Services, Naval Headquarter Islamabad.
<b>K</b>	The applicant should be a bonafide resident of the Federally Administered Tribal Areas (FATA). Diploma holders are also eligible to apply.	The applications are submitted to the Secretary, State and Frontier Regions Divisions, Government of Pakistan, Islamabad. Nominations and allocation of disciplines are also made by him.



Category	Who Can Apply?	How to Apply?
L	The applicant should be a bonafide resident of any of the following districts: Bahawalnagar, Bahawalpur, Rahim Yar Khan, Rajanpur, Jhang, Muzaffargarh, Attock, Chakwal, Mianwali, Dera Ghazi Khan and Jhelum.	Applications are to be submitted to the UET Lahore according to the procedure and requirements laid down in this prospectus. The selection and allocation of disciplines are made by the University according to merit.
M	The un-married children of employees of UET Lahore can apply under this category. Diploma holders are also eligible to apply. However, in order to determine relevant merit, Diploma holders will be placed below applicants possessing F.Sc. (Pre-Engineering.) / B.Sc. For inclusion in this category the applicant's parent has to fulfill the conditions regarding University service given in Form -V.	Applications are to be submitted to the UET Lahore according to the procedure and requirements laid down in this prospectus. Application should accompany with certificate from the Registrar of the University on Form -V and a certificate of being unmarried by a class-I gazetted officer or a University class-A officer on Form -VI. The selection and allocation of disciplines are made by the University according to merit.  Note: Children of employees whose services have been transferred to the University of Engineering & Technology Taxila are not eligible to apply under the category as their quota of seats has also been transferred to the University of Engineering & Technology Taxila.
N	The Punjab domiciled children of Engineers, Architects and Town Planners can apply under this category. Diploma holders cannot apply.	Applications are to be submitted to the University according to the procedure and requirements laid down in this prospectus. The selection and allocation of disciplines are made by the University according to merit. The applicants should furnish with their applications an attested photocopy of their parent's Bachelor's Degree in Engineering, Architecture or City & Regional Planning from a recognized University. Other qualifications such as AMIE (Pak) are not recognized for inclusion in this category.
O	The Punjab domiciled children of Alumni of UET Lahore can apply under this category. Diploma holders cannot apply.	Applications are submitted to the University according to the procedure and requirements. The selection and allocation of discipline is made by the University according to merit. The applicant should furnish with his application an attested photocopy of the degree 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 College of Engineering.
P	The applicant should be a bonafide resident of Punjab and should have passed B. Tech (Pass) from a recognized university of Pakistan.	Applications are to be submitted to the University according to the procedure and requirements. Selection and allocation of disciplines are made by the University according to merit.
Q	The applicant should be a bonafide resident of the Tribal Areas of D.G. Khan and Rajanpur. Diploma holders are not eligible to apply.	Applications are submitted to the DCO of respective district. Nominations are made by the DCOs on merit.

Category	Who Can Apply?	How to Apply?
R	The applicant should be a bonafide resident of Layyah and Bhakkar districts.	Applications are submitted to the University according to the procedure and requirements laid down in this prospectus. The selection and allocation of disciplines are made by the University according to merit.
S, SI	<p>The children of overseas Pakistanis, having requisite qualification other than DAE, can apply under 'S' category.</p> <p>The children of overseas Pakistanis, having passed DAE, can apply under 'SI' category.</p> <p>Orphan candidates meeting eligibility requirements may be sponsored by their real brother, real</p>	<p>Applications are submitted to the University according to the procedure and requirements laid down in this prospectus. The selection and allocation of disciplines are made by the University according to merit. The applicant is required to submit along with his application:</p> <p>a) A certificate on Form F-VIII regarding his parent's employment in a foreign country issued by the Pakistani embassy in that country</p> <p>b) A photocopy of his parent's resident visa for that country attested by the Pakistani Embassy in that country</p> <p>In case of an orphan applicant applying under this category, following additional documents are required: (1) Father's death certificate Issued by NADRA; (2) Proof of relationship with the guardian in the form of CNIC of all family members and NADRA Family Registration Certificate (FRC) highlighting the Family Tree structure of the applicant; (3) Copy of Nikahnama in case the guardian is the maternal uncle (Mamoo) of the applicant. Scanned / faxed copy of employment certificate and visa shall not be entertained.</p>
T	Punjab domiciled disabled candidates, excluding the disability of deafness, dumbness and blindness, can apply under this category.	Applications, along with a medical certificate mentioning the disability, are submitted to the UET Lahore according to the procedure and requirements laid down in this prospectus. The selection and allocation of disciplines are made by the University according to merit.
U	These seats are for students of Baluchistan and FATA, under project provision of "Higher Education Opportunities for Students of FATA and Baluchistan".	Applications are received by Project Director (BAL-FATA Project), Higher Education Commission, H-9, Islamabad. Selected candidates are nominated by the Higher Education Commission of Pakistan.
SF	The applicant should be a bonafide resident of Punjab and should have passed B. Tech (Pass) from a recognized university of Pakistan.	Applications are received at HEC, Islamabad, by Director (Academics), HEC, H-9, Islamabad, Pakistan. Information is available on HEC website <a href="http://www.hec.gov.pk">www.hec.gov.pk</a> . <u>Selected candidates are nominated by the Higher Education Commission of Pakistan.</u>



## APPLICATION FILLING AND SUBMISSION



### 1. REQUIRED DOCUMENTS

For All Candidates attested photocopies of the following documents are required to be submitted:

- a) Degree, Diploma or Certificate of all the examinations on the basis of which admission is sought, that is, Matric/ S.S.C. or equivalent, Intermediate/H.S.S.C. or equivalent, B.Sc., Diploma of Associate Engineer, or B.Tech. (Pass)
- b) Detailed Marks Certificates
- c) CNIC or B-Form issued by NADRA
- d) Domicile Certificate
- e) Certificate of passing additional Mathematics, if applicant has passed F.Sc. (Pre-Medical)
- f) If you are claiming to be Hafiz-e-Quran, read clause "Credit for Hafiz-e-Quran" in the Prospectus carefully
- g) If you are claiming to be Sports person, read Clause "Credit for Sports" of the Prospectus carefully
- h) If you are son/daughter of Armed Forces Personnel and are not seeking admission 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 or equivalent of the area about the place of your parent's posting

### 2. ADDITIONAL DOCUMENTS FOR SPECIFIC CATEGORIES

**Category P:** Attested photocopy of Diploma of Associate Engineer

**Category M:** Original certificate from the Registrar of the UET Lahore on prescribed Form-V and an undertaking of being unmarried on Form-VI

**Category N:** Attested photocopy of the relevant degree of

applicant's father or mother

**Category O:** Attested photocopy of the degree issued by UET Lahore to applicant's father or mother

**Category S & SI:** Original certificate on prescribed Form F-VIII regarding parent's employment in a foreign country and a photocopy of his resident visa attested by the Pakistan embassy in that country. In case of an orphan applicant applying under this category, following additional documents are required: (1) Father's death certificate Issued by NADRA; (2) Proof of relationship with the guardian in the form of CNIC of all family members and NADRA Family Registration Certificate (FRC) highlighting the Family Tree structure of the applicant; (3) Copy of Nikahnama in case the guardian is the maternal uncle (Mamoo) of the applicant.  
Scanned / faxed copy of employment certificate and visa shall not be entertained.

### 3. For Punjab Domiciled Applicants Who Possess Qualifications From Outside Punjab

Applicants for categories A, F, L, N, Q & R who have passed both the Secondary School Examination and the Higher Secondary School Examination from any Board of Intermediate and Secondary Education, not included in the Punjab province or Federal Capital Areas, Islamabad; OR, applicants for category I who passed their Diploma of Associate Engineer from a Board of Technical Education other than that of Punjab; OR, applicants for category P who have passed the Diploma



of Associate Engineer from a Board of Technical Education other than that of Punjab or the B.Tech.(Pass) examination from a University other than the University of Engineering and Technology, Lahore (that is, even if one of the two examinations has been passed from outside the Punjab Province), are required to submit the additional documents as prescribed below:

**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 -III 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 applicants study corresponds with the period of the posting of the parent in that province.

**b) Children of the Armed Forces Personnel**

In addition to the seats reserved for the category J, the children of the Armed Forces Personnel can apply for admission on basis of merit against seats reserved for their province of domicile or the seats reserved for the province in which their parent (the member of the Armed Forces) is posted. Thus, an applicant who is domiciled in Sindh but his parent is posted in Punjab can apply against seats reserved for Sindh or against seats reserved for Punjab. However, if he applies under category A, he has to submit with his application a certificate from the GOC of the area regarding the place of his parent's posting.

**c) All other applicants have to submit the following additional documents**

- An attested Photocopy of father's/mother's domicile certificate of the Punjab Province or the Federal Capital area, Islamabad
- Documentary proof in the form of a certificate on Form -IV from the election officer of concerned area of the Punjab Province/Federal Capital Area, Islamabad to the effect that name of the applicant's father/mother appears in the electoral rolls
- An attested photocopy of the relevant page of the electoral rolls on which the name of the father/mother of the applicant appears
- An attested photocopy of the identity card of the applicant's father/mother
- An undertaking from the candidate on Form -II
- Applicant whose father is not alive

- In case his father is not alive and the above documents cannot be produced, the applicant should submit:
- Documentary proof of his father's death
- Documentary evidence of his parent's immovable property in Punjab or Federal Capital Area, Islamabad

#### 4. APPLICATION FEE

- a) The price of Prospectus and Application Form is of Rs. 350/-. The application processing and preference fee is Rs. 500/-. Both are to be paid at the time of purchase of prospectus
- b) The application and verification fee once remitted shall not be refunded.

#### 5. HOW TO COMPLETE THE ONLINE APPLICATION FORM

- a) You can fill the admission application form by logging into <http://admission.uet.edu.pk>
- b) You will be asked to enter the following information:
  - Entry Test Roll Number
  - Date of Birth
  - CNIC Number
- c) On the next screen, you will see your personal information already entered while submitting the Entry Test Form. Here you will be required to enter your obtained and total marks in F.Sc. or equivalent examination on the basis of which you are applying for admission.
- d) Next you will choose your preferences for programs/disciplines, campuses and categories.
- e) Utmost care must be exercised while giving preferences. The following aspects must be kept in mind while filling the preferences:
  - Preferences of disciplines, campuses and categories once chosen and submitted cannot be changed. Ineligible category will result in cancellation of the application.
  - Candidates must note that after the display of first three merit lists, no application would be entertained moving to a lower merit preference. Applications for moving into lower merit preference would only be accepted after the fourth and last merit list as per the announced schedule.

- No request for freezing by a candidate, admitted in the lower preference discipline, would be entertained. The candidate will continue to be considered for movement into his/her higher preference in subsequent merit lists.
- f) Print out this application form and attach all the documents as described in Declaration Form available in the prospectus

#### 6. INCOMPLETE APPLICATIONS

**APPLICATIONS WHICH ARE INCOMPLETE IN ANY RESPECT SHALL NOT BE ENTERTAINED. APPLICATION FORM, FEE AND THE DOCUMENTS SUBMITTED WITH IT SHALL NOT BE RETURNED ON ANY GROUND.**

### PROCEDURE FOR THE SELECTED CANDIDATES

#### 1. NOTIFICATION OF SELECTION

A list of selected candidates will be put up on the University notice boards and on the UET web site; "<http://admission.uet.edu.pk>" as well. Kindly note that no written offer letter would be dispatched to selected candidates. It is responsibility of the candidate to remain abreast with the status of admissions as available on the web site and on the notice boards.

**IMPORTANT: Consideration in the 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 dues and documents. If he fails to do so, his name would be excluded from any future merit lists and his admission would be canceled.**

#### 2. DEPOSITING OF DUES AND DOCUMENTS

Within the prescribed time, a selected candidate is required to pay the University dues and submit the following documents in a manner prescribed on the website "<http://admission.uet.edu.pk>" to the **Deputy Registrar, Students Section:**

- a) Paid Original Bank Challan as proof of payment of dues. Candidate must keep photocopies of this challan for his/her own record and for submission to the department.
- b) Original Domicile Certificate.
- c) Original applicable certificates and degree, like Matric/"O"-Level, F.Sc./ "A"-Level, B.Sc, Diploma of Associate Engineer (DAE), B.Tech(Pass) or any equivalent qualifications.
- d) SIX sets of photocopies of all documents listed in 2(b) and 2(c) above.
- e) Six copies of the most recent passport size photograph
- f) Two attested copies of CNIC/ "B" Form.
- g) Bio-data card Form-IX duly completed in all respects.
- h) Medical Certificate Form-X duly signed and stamped by Medical Practitioner registered with PMDC.
- i) Duly attested Current Income certificate of the parent/guardian.
- j) Undertaking (Sample Form –XI) on a Rs. 100/- judicial paper duly completed.

#### 3. RELAXATION IN TIME LIMIT

If a selected candidate is prevented by unavoidable circumstances from timely fulfillment of the requirements laid down in the above clause, then 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.

#### 4. FORFEITURE OF RIGHT OF ADMISSION

A selected candidate who fails to fulfill the requirements laid down in the above clause within the prescribed time-limit shall forfeit his right of admission.

#### 5. PROVISIONAL ADMISSION

On fulfillment of the obligations mentioned in the above clause a selected candidate will be admitted to the University. This admission shall however, be provisional until all the original degrees or certificates submitted by him have been checked for their veracity. In case any document proves to be false, fake, or fabricated 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 favour of the University.

## 6. WARNING

**IF AT ANY STAGE, A STUDENT IS FOUND INDULGING IN POLITICS, HIS ADMISSION WILL BE CANCELLED AS REFERRED TO IN UNDERTAKING FORM F-XI.**

## 7. DEADLINE FOR ADMISSION

Admission shall be closed after the expiry of thirty days from the commencement or registration of the first year class, whichever is later.

**Note:** Applicable to all the candidates who apply for admission on "merit" as well as under "reserved" seats

## 8. NOTIFICATION OF SELECTION OF CATEGORIES B, C, D, E, H, J, K, Q & U

The applicants for the seats reserved for these categories will be informed about selections by the authorities responsible for their selection. After that the University will issue them call letters with a target date to report in the Students Section to complete the remaining admission formalities within the stipulated time.

## 9. THE ADMISSION MADE AS A RESULT OF AN ERROR, OMISSION OR MISTAKE SHALL NOT CONFER ANY RIGHT ON AN APPLICANT.

## 10. HOSTEL ACCOMMODATION

- Hostel accommodation is limited and is provided on the basis of merit. Local students are not eligible to apply.
- The selectees for Lahore Campus may apply to Senior Warden, University of Engineering and Technology, Lahore for hostel accommodation on prescribed application form obtainable from Senior Warden's office, along with the following documents:
  - Two attested photographs
  - An attested photocopy of the domicile certificate; and

- Attested photocopy of Bank Challan from the Habib Bank (Engineering University Branch).
- The candidate selected for admission at Kala Shah Kaku campus should apply to Hostel Warden of KSK Campus for hostel accommodation.
  - For hostel accommodation at Faisalabad Campus candidate should apply to Hostel Warden of Faisalabad Campus.
  - For hostel accommodation at Rachna College of Engineering and Technology, candidate should apply to Hostel Warden of Rachna College of Engineering and Technology, Gujranwala.

**NOTE: IT IS NOT A RIGHT/PRIVILEGE OF STUDENT TO GET HOSTEL ACCOMMODATION. IT IS SOLELY AT THE DISCRETION OF THE UNIVERSITY TO OFFER A PLACE IN A HOSTEL. A STUDENT INVOLVED IN ANY ACT OF MISCONDUCT, ILL DISCIPLINE, VIOLATION OF RULES AND INVOLVEMENT IN ANY POLITICAL ACTIVITY SHALL BE INELIGIBLE FOR HOSTEL ACCOMMODATION**







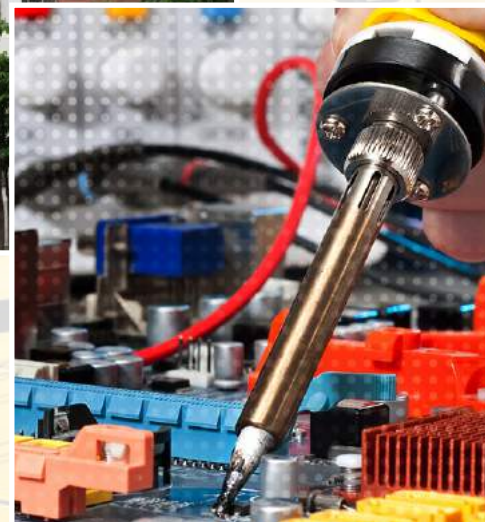
# DEPARTMENTS OF MAIN CAMPUS





# FACULTY OF ELECTRICAL ENGINEERING

Department of Electrical Engineering  
Department of Computer Science and Engineering





# DEPARTMENT OF ELECTRICAL ENGINEERING

## ELECTRICAL ENGINEERING

### Dean

Prof. Dr. Suhail Aftab Qureshi

### Chairman

Prof. Dr. Tahir Izhar

### Professors

Dr. Zubair A. Khan  
Dr. Khalid M. Hasan  
Dr. Muhammad Imran Sheikh  
Dr. Haroon Atique Babri  
Dr. Waqar Mahmood  
Dr. Muhammad Tahir

### Associate Professors

Dr. Asim Loan  
Dr. Muhammad Asghar Saqib  
Dr. Umar Tabrez Shami  
Dr. Galib A. Shah  
Dr. Kashif Javed

### Assistant Professors

Dr. Farhan Mahmood  
Dr. Syed Shah Irfan Hussain  
Dr. Syed Abdul Rahman Kashif  
Mr. Arslan A. Rahim  
Ms. Sahar Idrees

Dr. Omer Waqar

Mr. Muhammad Bilal  
Dr. Ubaid Ullah Fayyaz  
Dr. Rabia Nazir

### Lecturers/Laboratory Engineers

Dr. Sidra Farid  
Ms. Ifrah Saeed  
Mr. Salman Fakhar  
Mr. Mustafeez-ul-Hassan  
Mr. Habib Wajid  
Ms. Huma Iqbal  
Ms. Noor ul Ain

The Department was established in 1923 as a part of the MacLagan Engineering College. Currently, it has a total student enrollment of about 1100 including both graduate and undergraduate students.

### MISSION

To ensure understanding and application of electrical engineering fundamentals by inculcating analysis and design skills for betterment of humanity and to become a center of excellence in the field of electrical engineering.



## DEPARTMENT OF ELECTRICAL ENGINEERING

### Program Educational Objectives (PEOs)

**PEO-01:** Graduates will be able to opt a range of careers as manufacturing engineers, services engineers and entrepreneurs.

**PEO-02:** Graduates will be able to be a part of international academia as students and researchers.

**PEO-03:** Graduates will demonstrate higher standards of moral and ethical values.

**PEO-04:** Graduates will be able to lead their teams, departments and organizations.



### COURSES OF STUDY

The Department offers the following programs:

- a) B.Sc. in Electrical Engineering
- b) M.Sc. in Electrical Engineering with the following specializations:
  - Computer
  - Control Systems
  - Electronics and Communications
  - Power
- c) M.Sc. in Telecommunication Networks
- d) Ph.D. in Electrical Engineering

The bachelor's degree curriculum provides exposure to basic knowledge in Physics and Mathematics followed by an intensive coverage of the principles of Electrical Engineering both in classrooms and laboratories. To stimulate their imaginations, students are assigned projects at appropriate stages. Furthermore, the curriculum is regularly revised to cater for the contemporary needs of the field of engineering. In order to reinforce the liaison between industry and academia, a final year project exhibition is held every year to provide the students with an opportunity to manifest their technical acumen. Internships in the local industry provide the students with hands on experience in industrial equipment. Moreover, breadth is added to their technical know-how through industrial tours to the



## DEPARTMENT OF ELECTRICAL ENGINEERING

country. Students are encouraged to join the professional associations to widen their exposure to engineering research and to provide them with an active platform for exchange and expression of their technical ideas.

### LABORATORIES AND OTHER FACILITIES

- ✓ Analog & Digital Electronics
- ✓ Applied Electricity
- ✓ Basic Electrical Engineering
- ✓ Communication Systems
- ✓ Computer Networking
- ✓ Computer Systems
- ✓ Control Systems
- ✓ Digital Signal Processing
- ✓ High Voltage Engineering
- ✓ Industrial & Power Electronics
- ✓ Microcomputer/Microcontroller Interfacing
- ✓ Microwave Engineering
- ✓ PCB Design
- ✓ Power Systems
- ✓ Project Design
- ✓ SUPCON Automation
- ✓ Electrical Machines
- ✓ ZTE – UET Telecommunication Center

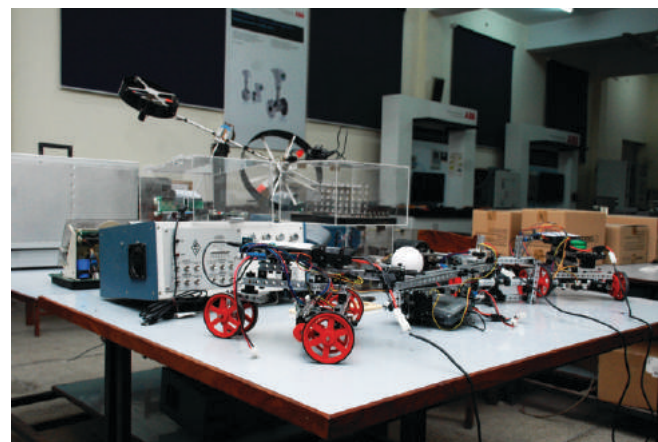
The Department has a faculty of 29 out of which 20 have a Ph.D., 7 have a Master's degree and 2 have a Bachelor's



Degree. Faculty members with higher qualifications are engaged in M.Sc./Ph.D. teaching and supervision of research. The Department also has 15 graduate teaching assistants who assist faculty members in theory as well as Lab.

Research work being carried out at the Department, has direct bearing on the needs of national industry. The Department also offers consultancy services and testing facilities to local manufacturers of electrical and electronics equipment. Faculty members and postgraduate students are engaged in quality research and publish/present research papers in national and international journals and conferences.

The Department has Research Laboratories and an up-to-date library for the use of the faculty and the students. The Department also organizes seminars and workshops frequently in various areas of electrical, electronics, computer, and control engineering. Faculty members and prominent researchers from home and abroad deliver these seminars.



# B.Sc. ELECTRICAL ENGINEERING CURRICULUM

## ELECTRICAL ENGINEERING

Knowledge Area: Management Sciences – 6 Credit Hours			
Code	Subject Title	Credit Hours	
		Theory	Lab
MGT 211	Principles of Management	3	0
MGT 414	Entrepreneurship and Business Management	3	0
Knowledge Area: Humanities – 12 Credit Hours			
IS-101	Islamic/ Ethics & Pakistan Studies I	3	0
IS-201	Islamic/ Ethics & Pakistan Studies II	3	0
HU-221	Technical Writing and Presentation Skills	3	0
HU-111L	Communication Skills	0	1
HU-400	International Language (No credit)	0	0
MGT-102	Sociology	2	0
Knowledge Area: Natural Sciences – 15 Credit Hours			
PHY 111	Applied Physics	2	1
MA 123	Calculus	3	0
MA 228	Differential Equations (MA-123)	3	0
MA 234	Linear Algebra	3	0
MA 346	Numerical Methods	3	0
Knowledge Area: Computing – 10 Credit Hours			
CS 141	Introduction to Computing	2	1
EE 170	Programming Fundamentals	2	1
EE 232	Data Structures and Algorithms (EE 170)	3	1
Knowledge Area: Engineering Foundation – 30 Credit Hours			
EE 100	Electric Circuits	3	1
EE 101	Electrical & Electronics Workshop	0	1
EE 110	Circuit Analysis and Design (EE 100)	3	1
EE 212	Semiconductor Devices	3	1
EE 272	Digital Systems	3	1
EE 220	Signals and Systems	3	0

Knowledge Area: Engineering Foundation – 30 Credit Hours			
Code	Subject Title	Credit Hours	
		Theory	Lab
ME 100L	Workshop Practice	0	1
ME 124L	Engineering Drawing	0	1
EE 300L	Embedded Systems Laboratory	0	1
Knowledge Area: Majore Based Core (Breadth and Depth – 50 Credit Hours			
EE 213	Analog and Digital Electronic Circuits (EE 212)	3	1
EE 322	Analog and Digital Communications	3	1
EE 312	Power Electronics	3	1
EE 340	Control Systems	3	1
EE 250	Electric Machinery Fundamentals	3	1
EE 357	Power System Analysis	3	1
EE 358	Power Distribution Systems	3	0
EE 380	Electromagnetic Theory	3	0
EE 384	Digital Signal Processing (EE 220)	3	1
EE 4XX	Elective	3	1
EE 4XX	Elective	3	1
EE 4XX	Elective	3	1
EE 4XX	Elective	3	1
Knowledge Area: Interdisciplinary Breadth – 6 Credit Hours			
ME 102	Applied Thermodynamics	3	1
IME 251	Social & Ethical Aspects in Engineering	2	0
Knowledge Area: Senior Year Project – 6 Credit Hours			
EE 499a	Senior Year Project (Phase-I)	0	3
EE 499b	Senior Year Project (Phase-II)	0	3

### ELECTIVES

EE 411: Industrial Control Systems (L)  
 EE 412: Integrated Electronic Circuits (L)  
 EE 424: Satellite Engineering  
 EE 425: Wireless Communications (L) - Pre-Req: EE 384  
 EE 426: Digital Image Processing (L)  
 EE 431: Operating Systems (L)  
 EE 432: Computer Networks (L)  
 EE 436: Database Engineering (L)  
 EE 439: Introduction to Machine Learning  
 EE 450: High Voltage Engineering (L)

EE 452: Renewable Electrical Energy Systems  
 EE 453: Power System Operation and Control (L) - Pre-Requisite: EE 357  
 EE 454: Power System Protection (L) - Pre-Requisite: EE 357  
 EE 456: Introduction to Smart Grids  
 EE 460: Electrical Drives (L)  
 EE 461: Design of Electrical Machines (L)  
 EE 475: Computer Architecture (L)  
 EE 476: Introduction to VLSI Systems (L)  
 EE 477: Software Construction  
 EE 481: Optical Circuits and Systems  
 EE 482: Microwave Engineering - Passive Devices (L)

EE 483: Antenna Systems (L)  
 EE 484: Microwave Engineering - Active Devices (L) - Pre-Req: EE 482  
 EE 485: Electromagnetic Compatibility  
 EE 419: Electrical Instruments and Measurements (L)  
 EE 492: Biomedical Instrumentation (L) - Pre - Req: EE 213  
 EE 493: Clinical Laboratory Instrumentation (L) - Pre-Req: EE 492  
 EE 494: Biomedical Imaging (L)  
 EE 495: Biomechanics (L)  
 EE 496: Medical Robotics(L) - Pre - Req: EE 340



## B.Sc. ELECTRICAL ENGINEERING RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
ME 102	Applied Thermodynamics	3	1		EE 101	Electrical & Electronics Workshop	0	1
MGT 102	Sociology	2	0		EE 100	Electric Circuits	3	1
ME 100L	Workshop Practice	0	1		ME 124L	Engineering Drawing	0	1
PHY111	Applied Physics	2	1		IS 101	Islamic & Pakistan Studies-I/Ethics	3	0
HU 1XX	International Language	No Cr			EE 170	Programming Fundamentals	2	1
MA 123	Calculus	3	0		HU 111	Communication Skills	0	1
CS 141	Introduction to Computing	2	1		MA 228	Differential Equations	3	0
Subtotal		16			Subtotal		16	
Year 2								
Semester 3					Semester 4			
EE 212	Semiconductor Devices	3	1		EE 213	Analog and Digital Electronic Circuits	3	1
EE 110	Circuit Analysis & Design	3	1		EE 220	Signals and Systems	3	0
EE 272	Digital Systems	3	1		EE 250	Electric Machinery Fundamentals	3	1
HU 221	Technical Writing & Presentation Skills	3	0		EE 232	Data Structures and Algorithms	3	1
MA 234	Linear Algebra	3	0		MA 346	Numerical Methods	3	0
Subtotal		18			Subtotal		18	
Year 3								
Semester 5					Semester 6			
EE 273	Microprocessor Systems	3	1		EE 322	Analog & Digital Communications	3	1
EE 340	Control Systems	3	1		EE 384	Digital Signal Processing	3	1
EE 302	Applied Probability	3	0		EE 312	Power Electronics	3	1
EE 357	Power System Analysis	3	1		EE 300L	Embedded Systems Laboratory	0	1
EE 380	Electromagnetic Theory	3	0		EE 358	Power Distribution Systems	3	0
					IME-251	Social & Ethical Aspects in Engg.	2	0
Subtotal		18			Subtotal		18	
Year 4								
Semester 7					Semester 8			
EE	Elective	3	1		EE	Elective	3	1
EE	Elective	3	1		EE	Elective	3	1
IS 201	Islamic & Pakistan Studies II/Ethics	3	0		MGT	Restricted Elective (Management)	3	0
MGT 211	Principles of Management	3	0		EE 499b	Project (Phase-II)	0	3
EE 499a	Project (Phase-I)	0	3					
Subtotal		17			Subtotal		14	

## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

### **Dean**

Prof. Dr. Suhail A. Qureshi

### **Chairman**

Prof. Dr. Muhammad Shahbaz

### **Professors**

Dr. Muhammad Shoaib

Dr. Shazia Shoaib

Dr. Khadim Hussain Asif

### **Sultan Qaboos Chair**

Prof. Dr. Waqar Mahmood

### **Adjunct Professor**

Dr. Sarmad Hussain, KICS

### **Associate Professors**

Dr. Syed Muhammad Ahsan

Dr. Irfan Ullah Chaudhary

Dr. Muhammad Junaid Arshad

Dr. Yasir Saleem

Dr. Muhammad Aslam

Dr. Usman Ghani Khan

Dr. Hafiz Muhammad Shahzad Asif

Dr. Muhammad Afzal

Dr. Tauqir Ahmad

Dr. Amjad Farooq

Dr. Faisal Hayat

### **Assistant Professors**

Dr. Sheikh Faisal Rashid

Dr. Ali Hammad Akbar

Dr. Tania Habib

Dr. Syed Khuldoon Khurshid

Dr. Awais Hassan

Mr. Talha Waheed

Ms. Amna Zafar

Ms. Hina Khalid

Mr. Asim Rehmat

Ms. Beenish Ayesha Akram

### **Lecturers**

Mr Ahmad Awais Chaudhry



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

## INTRODUCTION

The Department of Computer Science and Engineering was originally established as department of Computer Science in 1991. Its history dates back to the year 1968 when University of Engineering and Technology Lahore established a Computer Center. This center was equipped with a contemporary IBM 1130 third generation computer that batch processed submitted jobs. The computer was equipped with a disk and a monitor. The center was responsible for planning and teaching courses in Computer Science and Numerical Analysis, which formed an integral part of the curricula for all disciplines of B.Sc. Engineering degree in the university. The center also offered short term computer courses for other private and public sector organizations. In 1978, it started offering a Masters degree program in Computer Science, thus becoming the first center in the country to offer Computer Science degree. The department holds an endowment chair given by His Majesty Sultan Qaboos Bin Said-Al-Said, Sultan of Oman.

The department offers the following degree programs:

### **Computer Science:**

Ph.D., M.Sc., B.Sc.

### **Computer Engineering:**

Ph.D., M.Sc., B.Sc.

## MISSION

To disseminate computing education to the students of the department emphasizing entrepreneurship and ethical standards while encouraging them to remain abreast with latest developments in computing tools and processes and use their skills to identify and find solution to society's problems; And to use department's resources and computing expertise to help industry, government and community in solving their problems.

### **Program Educational Objectives (PEOs)**

- PEO-01: Excel in a career utilizing their education in Computer Engineering;
- PEO-02: Continue to enhance their knowledge;
- PEO-03: Be effective in multi disciplinary and diverse professional environments;
- PEO-04: Provide leadership and demonstrate professional integrity.

## DEGREE PROGRAMS

A four years degree program leading towards a B.Sc. (Hons) Computer Science was introduced by the department in 1999 and another 4 years B.Sc. program in Computer Science and Engineering in 2001. For students enrolling from September 2003 onwards, B.Sc programs have been re-named and modified into four years B.Sc. Computer Science (CS) and four years B.Sc. Computer Engineering (CE) programs. The B.Sc CS program is

accredited by National Computing Education Accreditation Council (NCEAC) and B.Sc (CE) program is accredited by Pakistan Engineering Council (PEC).

PhD. program in Computer Science was launched in 2002 and twenty six students have completed their Ph.D. degree to date from this department. M.Sc. and PhD programs in Computer Engineering have been launched since 2007.

## DOUBLE DEGREE PROGRAM

Three students each from the graduating class of Computer Science and Computer Engineering may opt for a second degree in Computer Engineering and Computer science as the case may be, subject to fulfillment of prescribed conditions, from Fall semester 2011.

## FACILITIES

With expansion in academic programs, computer laboratories in the department have risen to nine spread over two buildings. These laboratories are equipped with 200 computers fully networked with state of the art servers. Computer to student ratio is 1:1. The department is proud of its no-piracy policy. All the operating systems installed are either licensed or open-source operating systems. Microsoft, USA, has an academic alliance with the department. Oracle has also contributed software worth more than Rs 40 million to the department.



## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Department's computing facilities are linked with Research Center, Main Library and other teaching departments through a fiber optic backbone. Multimedia projectors are fitted where required and Internet facility is available in all laboratories. Department's class rooms are located in a third building known as New- Lecture Theaters.

In addition, the department has two Electronics Systems Laboratories, an Artificial Intelligence & Industrial Automation Laboratory and an Embedded Systems Laboratory.

### RESEARCH

Current topics of research of CSE faculty members include, but are not limited to, the following areas:

Estimation Theory, Signal Processing, Modern Control and related areas. Data bases, Semantic Web and related areas. Communications, Wireless Telecommunication and related areas. Software Engineering, Modeling and related areas. Data mining, Data warehousing, Artificial Intelligence and related areas. Artificial Intelligence, Multi-agents expert systems and related areas. Information Retrieval, Web Engineering, data bases and related areas. Computer Networks and related areas. Bio-informatics. Speech and Language Processing.



## B.Sc. COMPUTER ENGINEERING CURRICULUM

Knowledge Area: Humanities – 13 Credit Hours			
Code	Subject Title (Pre-requisites)	Credit Hours	
		Theory	Lab
IS-101	Islamic/ Ethics & Pakistan Studies I	3	0
IS-201	Islamic/ Ethics & Pakistan Studies II (IS-101)	3	0
HU-221	Technical Writing and Presentation Skills	3	0
HU-111L	Communication Skills	0	1
HU-400	International Language	3	0
Knowledge Area: Management Sciences – 6 Credit Hours			
MGT-414	Entrepreneurship & Business Management	3	0
MGTXXX	Project Management	3	0
Knowledge Area: Natural Sciences – 18 Credit Hours			
MA-123	Calculus	3	0
MA-224	Multivariate Calculus (MA-123)	3	0
PHY-121	Mechanics & Wave Motion	2	1
PHY-131	Electricity and Magnetism	2	1
MA-219	Linear Algebra and Complex Analysis	3	0
MA-225	Differential Equations and Transforms (MA-123)	3	0
Knowledge Area: Computing – 12 Credit Hours			
CS-141	Introduction to Computing	3	1
CS-142	Programming Fundamentals (CS-141)	3	1
CS-241	Object Oriented Programming (CS-142)	3	1
Knowledge Area: Engineering Foundation – 27 Credit Hours			
CSE-121	Circuit Analysis I (MA-123)	3	1
CSE-221	Digital Logic Design (CS-141)	3	1
CSE-321	Electronics I (CSE-121)	3	1
CSE-371	Signals and Systems (CSE-121, MA-225, MA-219)	3	0
CS-362	Operating Systems (CSE-222, CS-212)	3	1
CSE-331	Computer Networks (CS-212)	3	1
CSE-322	Embedded Systems (CSE-222)	3	1
Knowledge Area: Major Based Core (Breadth) – 22 Credit Hours			
CS-211	Discrete Mathematical Structures (MA-123)	3	0
CS-212	Data Structures and Algorithms (CS-142, CS-211)	3	1
CSE-222	Computer Organization and Assembly (CSE-221, CS-142)	3	1
CS-201	Numerical Analysis (MA-123, CS-141)	3	1
CSE-301	Probability and Random Variables (MA-224)	3	0
CS-363	Database Systems (CS-212)	3	1

Knowledge Area: Major Based Core (Depth) – 14 Credit Hours			
Code	Subject Title (Pre-requisites)	Credit Hours	
		Theory	Lab
CS-381	Software Engineering (CS-241, CS-212)	3	1
CS-361	Artificial Intelligence (CS-211, CS-212)	3	1
CSE-421	Computer Architecture (CS-222)	3	0
CSE-471	Digital Signal Processing (CS-371)	2	1
Knowledge Area: Major Based Electives (12 Credit Hours)			
CSE-223	Circuit Analysis II (CSE-121)	3	0
CSE-422	Digital Design (CSE-222)	2	1
CSE-302	Control Systems (CSE-371, MA-219)	3	0
CSE-323	Electronics II (CSE-321)	3	0
CSE-423	Industrial Automation (CSE-221)	2	1
CS-462	Data Mining (CS-363)	3	0
CS-401	Computer Graphics (CS-212)	3	0
CS-445	Programming Languages (CS-212, CS-312)	3	0
CS-463	Bioinformatics (CS-363)	3	0
CS-464	Machine Learning (CS-361)	3	0
CS-461	Management Information Systems (CS-363)	3	0
CS-441	Mobile Application Development (CS-212, CS-241)	3	0
CS-442	Parallel Programming (CS-362)	3	0
CSE-473	Digital Image Processing (CSE-371)	3	0
CS-465	Data Warehousing (CS-362, CS-331)	3	0
CSE-424	Robotics and CNC Machines (CSE-322)	2	1
CS-481	Design Patterns (CS-381)	3	0
CSE-466	Computer Vision (CS-361)	3	0
CS-467	Ubiquitous Computing (CS-331)	3	0
CSE-472	Comm. Systems and Wireless (CS-331, CSE-371)	3	0
CSE-432	Internetworking with UNIX TCP/IP (CS-331)	3	0
CSE-431	Wireless Networks (CS-331)	3	0
CS 382	Web Technologies (CS-212)	3	0
Knowledge Area: Interdisciplinary Engineering Breadth (Electives) – 4 Credit Hours			
ME-100L	Workshop Practice	0	1
ME-229	Mechanics of Materials & Machine Design (PHY-101)	3	0
Knowledge Area: Final Year Design Project – 6 Credit Hours			
CSE-491	Final Year Project I	0	3
CSE-492	Final Year Project II (CSE-491)	0	3

## B.Sc. COMPUTER SCIENCE CURRICULUM

### COMPUTER SCIENCE & ENGINEERING

Knowledge Area: Humanities – 13 Credit Hours			
Code	Subject Title (Pre-requisites)	Credit Hours	
		Theory	Lab
IS-101	Islamic/ Ethics & Pakistan Studies I	3	0
IS-201	Islamic/ Ethics & Pakistan Studies II (IS-101)	3	0
HU-221	Technical Writing and Presentation Skills	3	0
HU-111L	Communication Skills	0	1
HU-400	International Language	3	0
Knowledge Area: Management Sciences – 6 Credit Hours			
MGT-414	Entrepreneurship & Business Management	3	0
MGTXXX	Project Management	3	0
Knowledge Area: Natural Sciences – 18 Credit Hours			
MA-123	Calculus	3	0
MA-224	Multivariate Calculus (MA-123)	3	0
PHY-121	Mechanics & Wave Motion	2	1
PHY-131	Electricity and Magnetism	2	1
MA-219	Linear Algebra and Complex Analysis	3	0
MA-225	Differential Equations and Transforms (MA-123)	3	0
Knowledge Area: Computing – 12 Credit Hours			
CS-141	Introduction to Computing	3	1
CS-142	Programming Fundamentals (CS-141)	3	1
CS-241	Object Oriented Programming (CS-142)	3	1
Knowledge Area: Engineering Foundation – 16 Credit Hours			
CSE-121	Circuit Analysis I (MA-123)	3	1
CSE-221	Digital Logic Design (CS-141)	3	1
CSE-222	Computer Organization and Assembly (CSE-221, CS-142)	3	1
CSE-331	Computer Networks (CS-212)	3	1
Knowledge Area: Major Based Core (Breadth) – 26 Credit Hours			
CS-211	Discrete Mathematical Structures (MA-123)	3	0
CS-212	Data Structures and Algorithms (CS-142, CS-211)	3	1
CS-201	Numerical Analysis (CS-141, MA-123)	3	1
CS-281	Object Oriented Analysis and Design (CS-142)	3	1
CSE-301	Probability and Random Variables (MA-224)	3	0
CS-362	Operating Systems (CS-212, CSE-222)	3	1
CS-363	Database Systems (CS-212)	3	1

Knowledge Area: Major Based Core (Depth) – 23 Credit Hours			
Code	Subject Title (Pre-requisites)	Credit Hours	
		Theory	Lab
CS-311	Analysis of Algorithms (CS-211, CS-212)	3	0
CS-312	Theory of Automata and Formal Languages <sup>3</sup> (CS-211)	3	0
CS-381	Software Engineering (CS-212, CS-241)	3	1
CS-361	Artificial Intelligence (CS-211, CS-212)	3	1
CS-382	Web Technologies (CS-212)	3	0
CS-411	Compiler Construction (CS-312)	3	0
CSE-421	Computer Architecture (CSE-222)	3	0
Knowledge Area: Major Based Electives – 12 Credit Hours			
CSE-223	Circuit Analysis II (CSE-121)	3	0
CSE-422	Digital Design (CSE-222)	2	1
CSE-302	Control Systems (CSE-371, MA-219)	3	0
CSE-323	Electronics II (CSE-321)	3	0
CSE-423	Industrial Automation (CSE-221)	2	1
CS-462	Data Mining (CS-363)	3	0
S-401	Computer Graphics (CS-212)	3	0
CS-445	Programming Languages (CS-212, CS-312)	3	0
CS-463	Bioinformatics (CS-363)	3	0
CS-464	Machine Learning (CS-361)	3	0
CS-461	Management Information Systems (CS-363)	3	0
CS-441	Mobile Application Development (CS-212, CS-241)	3	0
CS-442	Parallel Programming (CS-362)	3	0
CSE-473	Digital Image Processing (CSE-371)	3	0
CS-465	Data Warehousing (CS-362, CS-331)	3	0
CSE-424	Robotics and CNC Machines (CSE-322)	2	1
CS-481	Design Patterns (CS-381)	3	0
CSE-466	Computer Vision (CS-361)	3	0
CS-467	Ubiquitous Computing (CS-331)	3	0
CSE-472	Comm. Systems and Wireless (CS-331, CSE-371)	3	0
CSE-432	Internetworking with UNIX TCP/IP (CS-331)	3	0
SE-431	Wireless Networks (CS-331)	3	0
Knowledge Area: Interdisciplinary Engineering Breadth – 1 Credit Hour			
ME-100L	Workshop Practice	0	1
Knowledge Area: Final Year Design Project – 6 Credit Hours			
CSE-491	Final Year Project I	0	3
CSE-492	Final Year Project II (CSE-491)	0	3



## B.SC. COMPUTER ENGINEERING - RECOMMENDED SCHEME OF STUDIES

Year 1								
Semester 1					Semester 2			
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
MA-123	Calculus	3	0		MA-224	Multivariate Calculus	3	0
PHY-121	Mechanics & Wave Motion	2	1	CS-142	Programming Fundamentals	3	1	
IS-101	Islamic/ Ethics & Pakistan Studies I	3	0	CSE-121	Circuit Analysis I	3	1	
CS-141	Introduction to Computing	3	1	IS-201	Islamic/ Ethics & Pakistan Studies II	3	0	
ME-100L	Workshop Practice	0	1	PHY-131	Electricity and Magnetism	2	1	
	Sub Total	14			Sub Total	17		
Year 2								
Semester 3					Semester 4			
MA-219	Linear Algebra and Complex Analysis	3	0		MA-225	Differential Equations and Transforms	3	0
HU-221	Technical Writing and Presentation Skills	3	0		CS-212	Data Structures and Algorithms	3	1
CS-241	Object Oriented Programming	3	1		CSE-222	Computer Organization and Assembly	3	1
CS-211	Discrete Mathematical Structures	3	0		ME-229	Mechanics of Materials & Machine Design	3	0
CSE-221	Digital Logic Design	3	1		CS-201	Numerical Analysis	3	1
	Sub-Total	17				Sub Total	18	
Year 3								
Semester 5					Semester 6			
CSE-301	Probability and Random Variables	3	0		MGT-XXX	Project Management	3	0
HU-111L	Communication Skills	0	1		CS-362	Operating Systems	3	1
CSE-321	Electronics I	3	1		CSE-331	Computer Networks	3	1
CS-381	Software Engineering	3	1		CSE-322	Embedded Systems	3	1
CS-361	Artificial Intelligence	3	1		CS-363	Database Systems	3	1
CSE-371	Signals and Systems	3	0					
	Sub Total	19				Sub Total	19	
Year 4								
Semester 7					Semester 8			
MGT-414	Entrepreneurship & Business Management	3	0		XX-XXX	International language	3	0
CSE-421	Computer Architecture	3	0			CSE Elective	3	0
CSE-471	Digital Signal Processing	2	1			CSE Elective	3	0
	CSE Elective	2	1			CSE Elective	2	1
CSE-491	FYP I	0	3		CSE-492	FYP II	0	3
	Sub Total	15				Sub Total	15	

## B.SC. COMPUTER SCIENCE - RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
MA-123	Calculus	3	0		MA-224	Multivariate Calculus	3	0
PHY-121	Mechanics & Wave Motion	2	1		CS-142	Programming Fundamentals	3	1
IS-101	Islamic/ Ethics & Pakistan Studies I	3	0		CSE-121	Circuit Analysis I	3	1
CS-141	Introduction to Computing	3	1		IS-201	Islamic/ Ethics & Pakistan Studies II	3	0
ME-100L	Workshop Practice	0	1		PHY-131	Electricity and Magnetism	2	1
	Sub Total	14			Sub Total	17		
Year 2								
Semester 3					Semester 4			
MA-219	Linear Algebra and Complex Analysis	3	0		MA-225	Differential Equations and Transforms	3	0
HU-221	Technical Writing and Presentation Skills	3	0		CS-212	Data Structures and Algorithms	3	1
CS-241	Object Oriented Programming	3	1		CSE-222	Computer Organization and Assembly	3	1
CS-211	Discrete Mathematical Structures	3	0		CS-281	Object Oriented Analysis and Design	3	1
CSE-221	Digital Logic Design	3	1		CS-201	Numerical Analysis	3	1
	Sub-Total	17				Sub Total	19	
Year 3								
Semester 5					Semester 6			
CSE-301	Probability and Random Variables	3	0		MGT-XXX	Project Management	3	0
HU-111L	Communication Skills	0	1		CS-362	Operating Systems	3	1
CS-311	Analysis of Algorithms	3	0		CSE-331	Computer Networks	3	1
CS-381	Software Engineering	3	1		CS-382	Web Technologies	3	0
CS-361	Artificial Intelligence	3	1		CS-363	Database Systems	3	1
CS-312	Theory of Auomata and Formal Languages	3	0					
	Sub Total	18				Sub Total	18	
Year 4								
Semester 7					Semester 8			
MGT-414	Entrepreneurship & Business Management	3	0		XX-XXX	International language	3	0
CSE-421	Computer Architecture	3	0		CS-411	Compiler Construction	3	0
	CS/CSE Elective	2	1			CSE Elective	3	0
	CS/ CSE Elective	2	1			CSE Elective	2	1
CSE-491	FYP I	0	3		CSE-492	FYP II	0	3
	Sub Total	15				Sub Total	15	

## DEPARTMENT OF BIOMEDICAL ENGINEERING

### Dean

Prof. Dr. Suhail Aftab Qureshi

### Assistant Professors

Dr-Ing Abdul Rauf Anwar

Mr. Adnan Rauf

Dr. Saima Anwar

Dr. Nida Iqbal

### Lecturers

Ms. Amber Habib

Dr. Shaima Farooqi



Biomedical Engineering programs are being offered at the university's Kala Shah Kaku (KSK) and Narowal campuses. The program at Narowal campus will be initiated after approval from Pakistan Engineering Council is received.

### STUDY PROGRAMS

- **B.Sc. Biomedical Engineering**

### Technology

- **B.Sc. Biomedical Engineering**

### LABORATORIES

Department houses six laboratories which enable students to get hands on experience of basic concepts they are learning in theory classes.

#### 1. Bio-Medical Instrumentation:

Students will learn how to record and analyze signals associated with cardiovascular, neuromuscular, and respiratory systems with the help of computer based data acquisition systems.

#### 2. Biomaterials:

Focus of Biomaterials lab

is to advance the understanding of students about designing, synthesis and evaluation of biomimetic materials.

- #### 3. Bioengineering Lab:
- The vision of Bioengineering lab is to help the students to learn, how they can engineer biomolecules and living

systems including bacteria and animal cells to improve health

#### 4. Human Anatomy & Physiology

**Lab:** In this lab, students will learn the structure and function of human body with the help of models & software based lab tutor system.

#### 5. Simulation / Signal Processing

**Lab:** Simulation serve as an alternative to real patients. In this lab, artificial representation of a real-world processes & clinical scenarios are created to introduce students to normal physiology and pathogenesis.

- #### 6. Bio-Mechanics Lab:
- In this lab students will be introduced to basic concepts related to measurement and investigation of human body movement and forces applied at joints during sports, health and disease.

**(Kala Shah Kaku  
and Narowal  
Campuses only)**



# B.Sc. BIOMEDICAL ENGINEERING CURRICULUM

## 1. Knowledge Area – Humanities (14 Credit Hours)

Course Code	Subject Title	Hours	
		Theory	Lab
HU-111	Communication Skills	0	1
HU-221	Technical Writing and Presentation Skills	3	0
IS-101	Islamic and Pak Studies/Ethics 1	3	0
IS-201	Islamic and Pak Studies/Ethics 2	3	0
HU-151	International Language	0	0
HU-4XX	Clinical Psychology	2	0
IME-251	Social and Ethical Aspects in Engineering	2	0

## 2. Knowledge Area – Management (3 Credit Hours)

MGT-4XX	Management Elective	3	0
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## 3. Knowledge Area – Natural Sciences (18 Credit Hours)

PHY-123	Applied Physics	2	1
CH-100	Applied Chemistry	2	1
MA-123	Calculus	3	0
MA-228	Differential Equations	3	0
MA-234	Linear Algebra	3	0
MA-346	Numerical Methods	3	0

## 4. Knowledge Area – Computing (3 Credit Hours)

CS-141	Introduction to Computing	2	1
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## 5. Knowledge Area – Engineering Foundation (37 Credit Hours)

BME-141	Basic Biology	3	1
BME-131	Human Physiology & Anatomy	3	1
BME-242	Biochemistry	3	0
EE-272	Digital Systems	3	1
BME-211	Biophysics	3	1
EE-302	Applied Probability	3	0
EE-273	Microprocessor Systems	3	1
EE-199	Applied Electricity	3	1
EE-380	Electromagnetic Theory	3	0
MCT-331	Modeling & Simulation	3	1

## 6. Knowledge Area – Major Based Core (Breadth) (27 Credit Hours)

EE-220	Signals & Systems	3	0
BME-312	Biomechanics	3	1
BME-251	Biomaterials & Design	3	1
BME-422	Biomedical Imaging	3	1
EE-340	Control Systems	3	1
BME-243	Cell & Molecular Biology	3	1
BME-332	Biomedical Instrumentation	3	1



## 7. Knowledge Area – Major Based Core (Depth) (21 Credit Hours)

Course No	Title	Hours	
		Theory	Lab
BME-321	Biomedical Signal Processing	3	1
BME-352	Tissue Engineering	3	1
BME-333	Clinical Lab Instrumentation	3	1
BME-4XX	Technical Elective 1	2	1
BME-4YY	Technical Elective 2	2	1
BME-4ZZ	Technical Elective 3	2	1

## 8. Knowledge Area – Interdisciplinary (2 Credit Hours)

ME-100L	Workshop Practice	0	1
ME-124L	Engineering Drawing	0	1

## 9. Knowledge Area – Senior Design Project (6 Credit Hours)

BME-499a	Final Year Project (Phase 1)	0	3
BME-499b	Final Year Project (Phase 2)	0	3

## List of Technical Electives: (3 out of given 7 must be chosen)

1. BME-413-Rehabilitation and Sports Medicine (2+1)
2. BME-414-Biomedical Robotics (2+1)
3. BME-415-Biofluid Mechanics (2+1)
4. BME-416-Electromechanical Technology (2+1)
5. BME-423-Telemedicine & Medical Informatics (2+1)
6. BME-424-Neuroscience & Neural Networks (2+1)
7. BME-444-Genetic Engineering (2+1)

## List of Management Electives: (1 out of given 4 must be chosen)

1. MGT-313-Total Quality Management (3+0)
2. MGT-410-Project Management (3+0)
3. MGT-414-Entrepreneurship and Business Management (3+0)
4. MGT-460-Engineering Economics (3+0)



## B.Sc. BIOMEDICAL ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1								
Semester 1					Semester 2			
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
PHY-123	Applied Physics	2	1		EE-199	Applied Electricity	3	1
CS-141	Introduction to Computing	3	1	HU-111L	Communication Skills	0	1	
MA-123	Calculus	3	0	CH-100	Applied Chemistry	2	1	
BME-141	Basic Biology	3	1	MA-228	Differential Equations	3	0	
Audit Course	International Language	0	0	BME-131	Human Physiology & Anatomy	3	1	
ME-124L	Engineering Drawing	0	1					
Subtotal		15		Subtotal		15		
Year 2								
Semester 3					Semester 4			
MCT-331	Modeling & Simulation	3	1		BME-243	Cell & Molecular Biology	3	1
BME-251	Biomaterials & Design	3	1		MA-346	Numerical Methods	3	0
HU-221	Technical Writing and Presentation	3	0		EE-220	Signals & Systems	3	0
BME-242	Biochemistry	3	0		BME-211	Biophysics	3	1
ME-100L	Workshop Practice	0	1		EE-272	Digital Systems	3	1
MA-234	Linear Algebra	3	0				-	-
Subtotal		18			Subtotal		18	
Year 3								
Semester 5					Semester 6			
IS-101	Islamic/Ethics & Pak Studies 1	3	0		BME-321	Biomedical Signal Processing	3	1
BME-312	Biomechanics	3	1		BME-333	Clinical Lab Instrumentation	3	1
EE-302	Applied Probability	3	0		IS-201	Islamic/Ethics & Pak Studies 2	3	0
EE-273	Microprocessor Systems	3	1		EE-380	Electromagnetic Theory	3	0
BME-332	Biomedical Instrumentation	3	1		BME-352	Tissue Engineering	3	1
Subtotal		18			Subtotal		18	
Year 4								
Semester 7					Semester 8			
MGT-4XX	Management Elective	3	0		BME-4YY	Technical Elective 2	2	1
BME-4XX	Technical Elective 1	2	1		BME-4YY	Technical Elective 3	2	1
EE-340	Control Systems	3	1		BME-422	Biomedcial Imaging	3	1
BME-499a	Biomedical Engineering Project (P1)	0	3		BME-499b	Biomedical Engineering Project (P2)	0	3
IME-251	Social & Ethical Aspects in Engineering	2	0		HU-4XX	Clinical Psychology	2	0
Subtotal		15			Subtotal		15	

# FACULTY OF MECHANICAL ENGINEERING

Department of Mechanical Engineering  
Department of Industrial & Manufacturing Engineering  
Department of Mechatronics & Control Engineering





# DEPARTMENT OF MECHANICAL ENGINEERING

## Dean

Prof. Dr. Nadeem Ahmad Mufti

## Chairman

Prof. Dr. Nasir Hayat

## Professors

Dr. Tauseef Aized

Dr. Asad Naeem Shah

Dr. Fiaz Hussain Shah

## Associate Professors

Dr. Asif Mahmood Qureshi

## Assistant Professors

Mr. Azfar Kaleem

Dr. Muhammad Mahmood

Dr. Aslam Bhutta

Dr. Naseer Ahmad

Mr. Shabbir Hussain

Mr. Muhammad Rashid Sajid

Dr. Anees Ur Rehman

Mr. Muhammad Kashif Tariq

Mr. Umair Ashraf Khokhar

Dr. Muhammad Sajid Kamran

Mr. Hafiz Zahid Nabi

Mr. Ahmad Naveed

Mr. Muhammad Usman

Mr. Syed Saqib

Dr. Ghulam Moeen Ud Din

Dr. Muhammad Asim

Dr. Awais Ahmad Khan

## Lecturers

Mr. Shahid Pervaiz Malik

Hafiz Muhammad Ahmad

Syed Nadeem Abbas Shah

Mrs Anum Rehman

Mr. Talha Khan

Mr. Haris Hussain

Mr. M. Tahir Ameen

Syed Wasim Hassan Zubair

Ms. Hibbah Akhtar

Mr. M. Waqas Rafique

Mr. Muhammad Zubair Sheikh

Mr. Ahmad Iqbal

Ms. Anam Abbas

Mr. Rehmat Bashir

Mr. M. Waqar Nasir

Dr. Muhammad Usman

The Department of Mechanical Engineering is as old as the institution itself. The programs offered/being planned, are as below:

- B.Sc. Mechanical Engineering
- B.Sc. Automotive Engineering (Subject to approval from PEC)
- M.Sc. Mechanical Design Engineering
- M.Sc. Thermal Power Engineering
- M.Sc. Automotive Engineering (Subject to approval from HEC)

- Ph.D. in Mechanical Engineering

## MISSION

Mission of the Department of Mechanical Engineering is to produce engineers with broad and in-depth knowledge, creativity, who are capable of solving mechanical engineering problems, following professional ethics.

## DEPARTMENT OF MECHANICAL ENGINEERING

### Program Educational Objectives (PEOs)

- PEO-01: Apply the knowledge to solve analytical and practical engineering problems.
- PEO-02: Work for the continuous socio-technical development of the society.
- PEO-03: Exhibit strong communication, and managerial skills, as team leaders as well as team members.

### LABORATORIES AND OTHER FACILITIES

The latest equipment have been inducted in the following labs and students are encouraged to fully utilize the lab facilities.

- Thermodynamics
- Fluid Mechanics & Hydraulic Machines
- Mechanics of Machines
- Engineering Mechanics
- Materials Testing
- CAD/FEA
- Energy Technologies
- Heat Transfer
- Refrigeration & Air Conditioning
- Thermal Power Systems
- Motion Control

The Department has a number of licensed software (Pro- E, Solid Works, AutoCAD, CATIA, Fluent, ANSYS, TRANSYS, Solid Edge, HAP, Energy 10, MATLab etc.) and students make use of these throughout their studies.

### AUTOMOTIVE ENGINEERING CENTRE

This center has been established to contribute to the automotive engineering field through research and

innovation. A wide variety of R&D facilities such as, engine performance testing, emission testing, automotive noise level measurement, are available at the center to support educational and industrial requirement.

### CONSULTANCY & ADVISORY SERVICES

The Department believes in a strong Academic-Industrial interaction and regularly offer refresher courses to the local industry on various topics related to Mech. Engg. The Department works in close association with ESUPAK (Pvt) Ltd., to provide Consultancy and Advisory services to local industry.

### PROFESSIONAL SOCIETIES

- American Society of Mechanical Engineers (ASME) Student Chapter
- American Society of Heating, Refrigeration and Air Conditioning Engineering (ASHRAE) Student Chapter

Student chapters of ASME and ASHRAE have been established in the department, to promote scholarly activities among the student.



## B.Sc. MECHANICAL ENGINEERING - RECOMMENDED SCHEME OF STUDIES

Year 1							
Semester 1				Semester 2			
Code	Title (Pre-requisites)	Credit Hours		Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab			Theory	Lab
HU 111	Communication Skills	0	1	CS 101	Computing Fundamentals	2	1
MA 113	Calculus and Analytic Geometry	3	0	IS 101	Islamic & Pakistan Studies-I	3	0
Phy 119	Engineering Physics	2	1	MA 129	Vector and Complex Analysis	3	0
ME 100L	Workshop Practice	0	1	ME 122	Engineering Graphics	2	0
ME 111	Thermodynamics-I	3	1	ME 122L	Engineering Drawing	0	2
ME 121	Engineering Statics	2	0	ME 123	Engineering Dynamics (MA113, ME-121)	3	1
ME 131	Industrial Materials	2	0				
	<b>Sub Total</b>	<b>16</b>			<b>Sub Total</b>	<b>17</b>	
Year 2							
Semester 3				Semester 4			
EE 201	Electrical Engineering and Electronics	2	1	ME 231	Manufacturing Processes (ME-131)	3	1
IS 201	Islamic & Pakistan Studies-II (IS-101)	3	0	MA 242	Engineering Statistics	3	0
MA 225	Differential Equations and Transforms	3	0	ME 212	Thermodynamics-II (ME-111, ME-211)	3	1
ME 211	Fluid Mechanics-I (ME-123)	2	0	ME 213	Fluid Mechanics-II (MA-225, ME-211)	2	1
ME 221	Mechanics of Materials-I (ME-121)	3	1	ME 222	Mechanics of Materials-II (ME-221)	3	1
HU 221	Technical Writing & Presentation Skills	3	0				
	<b>Sub-Total</b>	<b>18</b>			<b>Sub Total</b>	<b>18</b>	
Year 3							
Semester 5				Semester 6			
ME 311	Hydraulic Machines (ME-213)	2	1	MGT 316	Project Management and Economics	3	0
ME 312	Heat and Mass Transfer (ME-212, ME-213)	3	1	MA 345	Numerical Methods in Computing	3	1
ME 321	Theory of Machines-I (ME-123)	3	0	ME 323	Machine Design and CAD-II (ME-322)	3	1
ME 322	Machine Design and CAD-I (ME-122L, ME-222)	3	1	ME 324	Theory of Machines-II (ME-321)	3	1
ME 331	Machine Tools and Machining (ME-100L, ME-131)	2	1	ME 332	Metrology and Quality Assurance (ME-242)	2	1
	<b>Sub Total</b>	<b>17</b>			<b>Sub Total</b>	<b>18</b>	
Year 4							
Semester 7				Semester 8			
ME411	IC Engines (ME-312)	2	1	ME 413	Power Plants (ME-312)	3	1
ME412	Refrigeration and Air Conditioning (ME-312)	3	1	ME 414	Energy Resources and Utilization (ME-312)	2	0
ME 421	Mechanical Vibrations (ME-324)	2	0	ME 431	Production & Operations Management	2	0
ME422	Mechanics of Material-III (MA-225, ME-222)	2	1	ME 451	Finite Element Analysis (MA-345)	2	1
ME441	Instrumentation and Control (EE-201, MA-242)	2	1	ME 499L	Project II (ME-498L)	0	3
ME 498L	Project I (HU-221)	0	3				
	<b>Sub Total</b>	<b>18</b>			<b>Sub Total</b>	<b>14</b>	



## B.Sc. AUTOMOTIVE ENGINEERING RECOMMENDED SCHEME OF STUDIES

Year 1								
Semester 1					Semester 2			
Code	Title	Credit Hours			Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab				Theory	Lab
HU 111	Communication Skills	0	1	CS 101	Computing Fundamentals	2	1	
MA 113	Calculus and Analytic Geometry	3	0	IS 101	Islamic & Pakistan Studies-I	3	0	
PHY 119	Engineering Physics	2	1	MA 129	Vector and Complex Analysis	3	0	
ME 100L	Workshop Practice	0	1	ME 122	Engineering Graphics	2	0	
ME 111	Thermodynamics-I	3	1	ME 122L	Engineering Drawing	0	2	
ME 121	Engineering Statics	2	0	ME 123	Engineering Dynamics (ME-113, ME-121)	3	1	
ME 131	Industrial Materials	2	0					
	Sub Total	16			Sub Total	17		
Year 2								
Semester 3					Semester 4			
Code	Title (Pre-requisites)	Credit Hours			Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab				Theory	Lab
EE 201	Electrical Engineering and Electronics	2	1	HU 221	Technical Writing & Presentation Skills	3	0	
IS 201	Islamic & Pakistan Studies-II (IS-101)	3	0	MA 242	Engineering Statistics	3	0	
MA 225	Differential Equations and Transforms	3	0	ME-212	Thermodynamics-II (ME-111, AM-211)	3	1	
AM-211	Fluid Mechanics (ME-123)	3	1	ME-222	Mechanics of Materials II (ME-221)	3	1	
ME 221	Mechanics of Materials-I (ME-121)	2	1	EE-202	Automotive Electronics (EE-201)	2	1	
AM-223	Vehicle Dynamics (ME-123)	2	0					
	Sub-Total	18			Sub Total	17		
Year 3								
Semester 5					Semester 6			
Code	Title (Pre-requisites)	Credit Hours			Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab				Theory	Lab
AM-321	Theory of Machines (ME-123)	3	1	MGT-316	Project Management and Economics	3	0	
ME 312	Heat and Mass Transfer (ME-212, ME-213)	3	1	MA-345	Numerical Methods in Computing	3	1	
AM-322	Design & Manufacturing I (ME-122L, AM-222)	3	1	AM-323	Design & Manufacturing II (AM-322)	3	1	
AM-313	Fuels and Combustion (AM-212, AM-211)	2	0	AM-315	Vehicle Air Conditioning (ME-312)	2	1	
AM-316	Total Quality Management	2	0	AM-317	Computer Integrated Manufacturing (AM-322, CS-101)	2	1	
AM-314	Vehicle Tribology (AM-211)	2	0					
	Sub-Total	18			Sub Total	17		
Year 4								
Semester 7					Semester 8			
Code	Title (Pre-requisites)	Credit Hours			Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab				Theory	Lab
ME-451	Finite Element Analysis (MA-345)	2	1	AM-422	Vibration & Noise Control (AM-321)	3	0	
ME-411	IC Engines (AM-313)	3	1	AM-412	Vehicle Emission (AM-411)	3	1	
AM-421	Chassis Design (AM-323)	2	0	ME 431	Production and Operations Management	2	0	
ME 441	Instrumentation and Control (EE-201, MA-242)	2	1	AM-413	Computational Fluid Dynamics (AM-211 & ME-451)	2	1	
AM-424	Hybrid Vehicles (AM-321)	2	1	AM-499L	Project II (AM-498L)	0	3	
AM-498L	Project I (HU-221)	0	3					
	Sub Total	18			Sub Total	15		

## DEPARTMENT OF INDUSTRIAL & MANUFACTURING ENGINEERING

### **Dean**

Prof. Dr. Nadeem Ahmad Mufti

### **Chairman**

Prof. Dr. Mohammad Pervez Mughal

### **Professor**

Dr. Muhammad Ajmal

### **Associate Professor**

Dr. Amjad Hussain

Dr. Muhammad Qaiser Saleem

### **Assistant Professors**

Ms. Rakhshanda Naveed

Dr. Sadaf Zahoor

Mr. Muhammad Faisal Shahzad

Mr. Kashif Ishfaq

Dr. Sarmad Ali Khan

Mr. Bilal Arshad

Dr. Syed Farhan Raza Rizvi

### **Lecturers**

Ms. Kiran Mughal

Ms. Sana Ehsan

Mr. Adeel Shahzad

Mr. Omer Asghar

INDUSTRIAL & MANUFACTURING ENGINEERING

## DEPARTMENT OF INDUSTRIAL & MANUFACTURING ENGINEERING

### MISSION

To impart quality industrial and manufacturing engineering knowledge through effective learning process for life-long career and leadership in the industry.

### Program Educational Objectives (PEOs)

The IME Program aims to equip students with:

- **PEO-01:** Effective application of knowledge and analytical skills to solve complex engineering problems related to Industrial and Manufacturing Engineering.
- **PEO-02:** Demonstrate management and communication skills complimenting technical competence.
- **PEO-03:** Ability to use and improve upon contemporary and emerging technologies while focusing lean methodologies.
- **PEO-04:** Demonstrate professional and ethical values and commitment towards continuous improvement.

### GENESIS

The discipline of Industrial and Manufacturing Engineering was introduced as a focus area in the Department of Mechanical Engineering in 1999. However, an independent department was established in 2006 to cater current needs of the industry which demand highly skilled and motivated engineers, equipped with excellent management skills along with strong engineering knowledge.

### INTRODUCTION

In a global marketplace, creating and maintaining competitive advantage is the key to success. Today's

industry leaders must satisfy customers' expectation for high quality products while dealing with the realities of soaring energy prices and increasing international competition. Cross-functional engineers, equipped with: a solid technical background, comprehension of new equipment and process technologies, a firm grasp of business matters and aspects of manufacturing policy, strong understanding of productivity improvement techniques and readiness to lead diverse teams, are the future of world-class manufacturing.

Today, almost all major manufacturing and services industries run their own graduate trainee programs to inculcate the above mentioned trades in the newly inducted graduates. However, Department of Industrial and Manufacturing Engineering has designed its curricula to give its graduates a head start by including courses like Manufacturing Processes, Industrial Materials, Hydraulics and Pneumatics, Engineering Economics, Communication Skills, Operations Research, Production & Operations Management, Total Quality Management, Entrepreneurship, Social & Ethical Aspects in Engineering, Finite Element Analysis, Maintenance Engineering & Management and Production Tooling Design to name a few.

### The department offers the following programs:

- Bachelors in Industrial and Manufacturing Engineering
- Masters and Ph.D. in:
  - a) Engineering Management
  - b) Manufacturing Engineering



## DEPARTMENT OF INDUSTRIAL & MANUFACTURING ENGINEERING

### LABORATORY FACILITIES

The department houses following laboratories containing equipment related to teaching, research and industrial support.

- Precision Machining
- Non-Conventional Processes
- Measurement and Calibration
- Rapid Prototyping
- Computer Systems
- CAD/CAM
- Machine Tools and Production Tooling
- Metrology and Quality Assurance
- Work Study and Ergonomics
- Plant Maintenance
- Foundry Shop



Additionally, a center named **“Foundry Service Center”** (FSC) has been established at the premises of the department with the help of “Small & Medium Enterprises Development Authority” (SMEDA) and “Pakistan Foundry Association” (PFA) with an aim to bridge the gap between industry and academia.

The department also assists students in acquiring industry internships for getting them exposed to the real life industrial environment, which enables them to integrate the practical knowledge with the theoretical one.



## B.Sc. INDUSTRIAL & MANUFACTURING ENGINEERING - RECOMMENDED SCHEME OF STUDIES

Year 1			
Semester 1			
Code	Title	Credit Hours	
		Theory	Lab
EE-199	Applied Electricity	3	1
MA-111	Applied Mathematics-I	3	0
IME-111	Industrial Materials	3	1
CY-181	Industrial Chemistry I	2	1
ME-100L	Workshop Practice	0	1
IME-131	Engineering Mechanics-I	3	1
	Sub-Total	19	
Year 2			
Semester 3			
Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
EE-214	Industrial Electronics (EE-199)	2	1
IME-233	Mechanics of Materials	3	1
IME-232	Engineering Mechanics –II (IME-131)	3	1
IME-241	Thermo-Fluids	3	1
IME-251	Social & Ethical Aspects in Engineering	2	0
	Sub-Total	17	
Year 3			
Semester 5			
Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
IME-322	Manufacturing Processes-II (IME-121, IME-262)	3	1
MA-345	Numerical Methods in Computing (MA-111, CS-101)	3	1
IME-371	Engineering Economics	2	0
IME-334	Mechanics of Machines (IME-232)	3	1
IME-353	Industrial Safety and Environment (IME-252)	2	0
	Sub-Total	16	
Year 4			
Semester 7			
Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
IME-465	Finite Element Analysis (IME-363, MA-245)	3	1
IME-466	Production Tooling Design (IME-323, IME-363)	3	1
IME-481	Metrology and Quality Assurance (IME-121, MA-244)	3	1
MGT-413	Entrepreneurship (IME-371)	3	0
IME-401	Project-I	0	3
	Sub-Total	18	
Semester 2			
Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
IS-101	Islamic & Pak Studies I	3	0
MA-112	Applied Mathematics-II (MA-111)	3	0
IME-121	Manufacturing Processes -I (IME-111, ME- 100L)	3	1
IME-161	Engineering Drawing and Graphics	1	2
CS-101	Computing Fundamentals	2	1
HU-111	Communication Skills	0	1
	Sub-Total	17	
Semester 4			
Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
IS-201	Islamic & Pak Studies II	3	0
MA-244	Probability and Statistics	2	1
IME-252	Work Study & Ergonomics (IME-251)	3	1
IME-262	Machine Design &CAD (IME-161, IME-233)	3	1
HU 221	Technical Writing and Presentation Skills	3	0
	Sub-Total	17	
Semester 6			
Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
IME-323	Manufacturing Processes-III (IME-322)	3	1
IME-363	CAD/CAM (IME-322)	3	1
IME-364	Instrumentation and Control (EE-214, MA-112)	3	1
IME-372	Operations Research	2	1
	Sub-Total	15	
Semester 8			
Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
IME-424	Computer Integrated Manufacturing (IME-363, IME-364)	3	1
IME-454	Maintenance Engineering & Management (IME-334, IME-241)	3	1
IME-455	Production and Operations Management (IME-252, IME-323, IME-481)	3	0
IME-456	Total Quality Management (IME-481)	3	0
IME-402	Project-II	0	3
	Sub-Total	17	

## DEPARTMENT OF MECHATRONICS & CONTROL ENGINEERING

### Dean and Chairman

Prof. Dr. Nadeem Ahmad Mufti

### Assistant Professors

Dr. Ali Raza

Dr. Ummul Baneen

Dr. Mohsin Rizwan

Dr. Muhammad Salman

Dr. Muhammad Ahsan

Dr. Syed Abbas Zulqurnain Naqvi

Dr. Sajid Iqbal

Ms. Ayisha Nayyar

Ms. Aisha Shoaib

Ms. Maliha Saleem Bakhshi

Mr. M. Ahsan Naeem

### Lecturers

Ms. Amina Younas

Mr. Muhammad Rzi Abbas

Mr. Misbah-ur-Rehman

### INTRODUCTION

chatronics is the synergistic combination of mechanical engineering, electronics, control engineering and computer science. It is essential in the design of intelligent products; it allows engineers to transform their concepts into reality. Currently, the use of intelligent products with improved flexibility, performance, reliability and maintainability is crucial for the economic vitality of any country. Thus, mechatronics engineering carries the potential to make major impacts upon various industries such as automotive, consumer electronics, biomedical and robotics/automation. At the same time, mechatronics is becoming popular at universities from the viewpoint of research as well. Research areas, relevant to mechatronics, are diverse and include robotics, actorics/sensorics, microelectromechanical systems (MEMS), mechatronic devices/machines, control of mechatronic systems, human-machine- interface/haptics, embedded computing and software engineering as well as design/integration methodologies for mechatronic systems.

Initially, mechatronics was offered as a postgraduate degree program at UET Lahore in 1999. Keeping in view the futuristic needs as well as the market demand, the undergraduate program was initiated in 2001. The programs were run by the department Mechanical Engineering, and after maturation, by independently constituted department of Mechatronics & Control Engineering (DMCE) from 2005. Present undergraduate enrollment is around 205 students. The undergraduate program is designed to address the needs of technology-based-industries. It provides in-depth knowledge in the fundamentals, design, development, analysis and operation of mechatronic systems. The objective of the program is to provide a course of study which enables the students to effectively design integrated systems. The prime role of mechatronics is one of initiation and integration throughout the design process, with mechatronics engineer as the team leader.



## DEPARTMENT OF MECHATRONICS & CONTROL ENGINEERING

Up until 2017 fourteen batches are serving the industry. Our graduates are serving in mechanical, electronic, instrumentation, automation, oil & gas, aviation and other sectors.

### MISSION

The department, through quality education and enabling environment, aims to foster professional engineers capable of designing complex Mechatronic systems, serving current industrial needs and developing innovative technologies.

### PROGRAMS OF STUDY

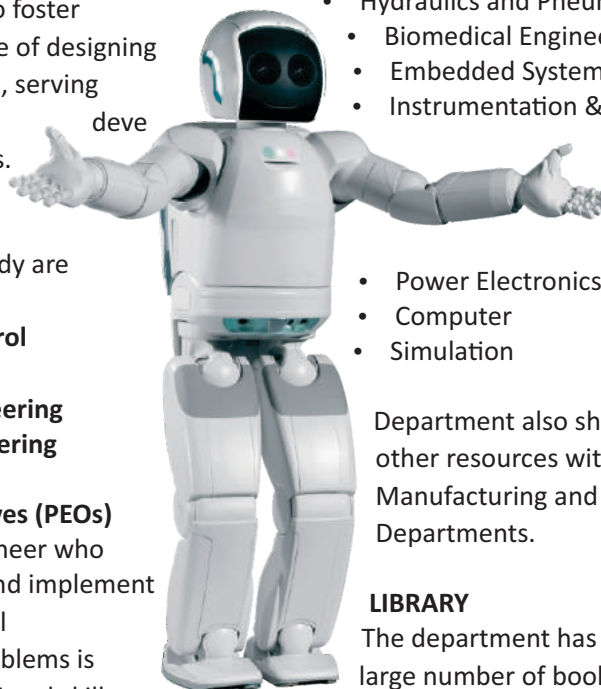
The following programs of study are offered:

- a) **B.Sc. Mechatronics & Control Engineering**
- b) **M.Sc. Mechatronics Engineering**
- c) **Ph.D. Mechatronics Engineering**

### Program Educational Objectives (PEOs)

To nurture Mechatronics engineer who  
**PEO-01:** Can skilfully design and implement integrated solutions to general Mechatronics engineering problems is capable of developing professional skills, while adhering to high ethical values, to excel in industry, research organizations and succeed in entrepreneurial ventures.

**PEO-02:** Can innovate and embark on new directions in advancing the Mechatronics technologies which have direct national and international relevance



### LABORATORIES & OTHER FACILITIES

To supplement theoretical studies with practical work, department is well equipped with resources in the form of following laboratories:

- AI & Robotics
- Digital Systems
- Automation
- Hydraulics and Pneumatics
- Biomedical Engineering
- Embedded Systems
- Instrumentation & Control

- Power Electronics
- Computer
- Simulation

Department also shares some of the labs and other resources with Mechanical, Industrial & Manufacturing and Electrical Engineering Departments.

### LIBRARY

The department has a well-stocked library with a large number of books and journals on mechatronics system design, robotics, industrial automation, artificial intelligence, machine vision, biomedical engineering, digital signal processing, control system, electronics, instrumentation and measurements, microprocessor and microcontroller CAD/CAM, engineering mechanics, engineering drawing and graphics, communication systems.

# DEPARTMENT OF MECHATRONICS & CONTROL ENGINEERING

## INDUSTRIAL TRAINING

Refresher courses in various fields of mechatronics engineering are offered to the industry and practicing professionals. Lectures and seminars on different technical aspects are arranged by local and foreign experts. The department also renders advisory services to a large number of organizations in the field of Automation, Hydraulics and Pneumatics, and Embedded Systems.

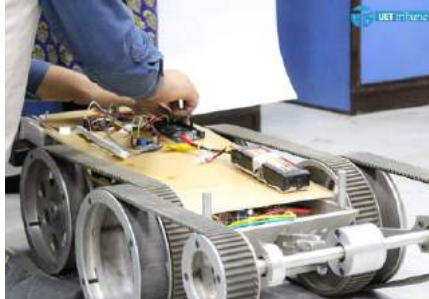
## STUDENT ADVISORY SERVICES

Department has deputed faculty members as session advisors so that students of the particular session may seek guidance regarding different aspects of students life in the university. Queries regarding curricular and co-curricular activities can be discussed with respective session advisor.

## MECHATRONICS CLUB

The department has launched a Mechatronics Club to promote design and development activities in the area. In normal routine, students of higher classes use advanced equipment but this club provides opportunity for juniors to mingle with seniors and learn skills right from the start. Club in-charge delivers lectures, designates

projects and provides guidance in programming computer interfacing, microcontrollers etc.



## RESEARCH

The department provides liberal facilities for research to the final year undergraduate students, postgraduate students and to the faculty members. Current research areas are.

## AI & ROBOTICS

The current research focus of this area include: Artificial intelligence, Machine Learning, Biological Computation, Evolutionary, Cellular and Neural Computation, Complex Adaptive Systems, Sensory Systems



and behavior evolution, Language evolution, Mimetic evolution.

## INDUSTRIAL AUTOMATION

Research in this area involves conventional as well as modern approaches for plant automaton; starting from use of PLC, Open architecture solutions, embedded solutions, SCADA, DCS and soft PLCs.



## BIOMETRICS

Biometrics deals with identification of individuals based on their biological or behavioral characteristics. As increasing number of biometric based identification systems are being deployed for many civilian & forensic applications, biometrics & its applications have evoked considerable interest. Such accurate identification of a person could deter crime, streamline business processes and save critical resources.

## B.Sc. MECHATRONICS & CONTROL ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1							
Semester 1				Semester 2			
Code	Title	Credit Hours		Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab			Theory	Lab
MA-113	Calculus and Analytic Geometry	3	0	MA-225	Differential Equations and Transforms (MA-113)	3	0
MCT-111	Engineering Graphics and Drawing	1	2	MCT-112	Engineering Statics	3	0
MCT-121	Electric Circuits	3	1	MCT-141	Computer Programming	1	2
IS-101/ HU-101	Islamic and Pak Studies –I/ Ethics and Pak Studies – I	3	0	MCT-122	Electronic Devices and Circuits (MCT-121)	3	1
PHY-118	Applied Physics	2	1	MCT-113	Manufacturing Processes	3	1
ME-100L	Workshop Practice	0	1				
	Sub Total	17			Sub Total	17	
Year 2							
Semester 3				Semester 4			
Code	Title (Pre-requisites)	Credit Hours		Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab			Theory	Lab
MA-234	Linear Algebra	3	0	MA-240	Numerical Analysis (MCT-141, MA-225)	2	1
MCT-211	Engineering Dynamics (MCT-112)	3	1	MCT-222	Embedded Systems (MCT-141, MCT-122, MCT-241)	3	1
MCT-221	Electrical Machinery (MCT-121)	3	1	MCT-213	Mechanisms (MA-113, MCT-211)	2	1
MCT-212	Mechanics of Materials (MCT-112, MA-113)	2	1	MCT-214	Fundamentals of Thermal Sciences (PHY-118)	2	1
MCT-241	Digital Logic Design (MCT-121)	3	1	HU-111	Communication Skills	0	1
				IS-201/ HU-201	Islamic and Pak Studies –II/ Ethics and Pak Studies – II	3	0
	Sub Total	18			Sub Total	17	
Year 3							
Semester 5				Semester 6			
Code	Title (Pre-requisites)	Credit Hours		Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab			Theory	Lab
MCT-301	Signals and Systems (MA-225)	2	1	MA-244	Probability and Statistics (MCT-141)	3	1
MCT-331	Modeling and Simulation (MA-234, MA-225)	3	1	MCT-333	Control Systems – I (MCT-331)	3	1
MCT-332	Instrumentation and Measurements (MCT-122)	3	1	MCT-334	Industrial Automation (MCT-241)	2	1
MCT-311	Design of Machine Elements and CAD/CAM (MCT-112)	3	1	MCT-321	Power Electronics (MCT-222)	3	1
MCT-312	Fluid Mechanics, Hydraulics and Pneumatics (MCT-112)	3	1	MCT-303	Principles of Management	3	0
	Sub Total	19			Sub Total	18	
Year 4							
Semester 7				Semester 8			
Code	Title (Pre-requisites)	Credit Hours		Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab			Theory	Lab
MCT-451	Robotics (MCT-331, MCT-211)	3	1	MCT-4xx	Elective I	2	1
MCT-431	Control Systems – II (MCT-333)	3	1	MCT-4xx	Elective II	2	1
MCT-411	Mechanical Vibrations (MA-234, MA-225)	3	0	MCT-4xx	Elective III	2	1
HU-221	Technical Writing & Presentation Skills	3	0	MCT-499	Final Project- II (MCT-498)	0	3
MCT-498	Final Project- I	0	3				
	Sub Total	17			Sub Total	12	



# FACULTY OF CIVIL ENGINEERING

Department of Civil Engineering  
Department of Transportation Engineering & Management  
Institute of Environmental Engineering & Research  
Department of Architectural Engineering & Design





## DEPARTMENT OF CIVIL ENGINEERING

### CIVIL ENGINEERING

#### Dean

Prof. Dr. Abdul Sattar Shakir

#### Chairman

Prof. Dr Habib-ur-Rehman

#### Professors

Dr. Muhammad Ilyas

Dr. Aziz Akbar

Dr. Zulfiqar Ali

Dr. Khalid Farooq

Dr. Muhammad Ashiq

Dr. Noor Muhammad Khan

Dr. Asad Ullah Qazi

Dr. Asif Hameed.

#### Associate Professors

Mr. Sardar Babar Khan

Dr. Riaz Ahmad Guraya

Dr. Muhammad Burhan Sharif

Dr. Rashid Hameed

Dr. Azhar Saleem

Dr. Hassan Mujtaba Shahzad

#### Assistant Professors

Dr. Imtiaz Rashid

Dr. Muhammad Irfan ul Hassan\*

Dr. Muhammad Yousaf

Dr. Nauman Khurram

Dr. Usman Akmal

Dr. Safeer Abbas

Mr. Ehtesham Mahmood

Mr. Usman Ali

Dr. Muhammad Irfan

Dr. Iffat Siddiqui

Dr. Umbreen us Sahar

Dr. Aqsa Shabbir

Dr. Ali Ahmed

Dr. Rizwan Azam

Dr. Muhammad Rizwan Riaz

#### Lecturers

Ms. Vaiza Shiraz

Mr. Muhammad Rehan Ashraf

Ms. Affifa Akram

Mr. Muhammad Ali

Mr. Ubaid Ahmad Mughal

Ms. Rabeea Bakhtawar

Ms. Aamina Rajput

Mr. Bilal Ahmad Khokar

Mr. Muhammad Kashif

Mr. Akbar Tufail

Mr. Abdul Rehman



## DEPARTMENT OF CIVIL ENGINEERING

Civil engineering is a professional engineering discipline that deals with the planning, design, construction, operation and maintenance of the physical and naturally built environment, including works such as buildings, bridges, flyovers, under passes, roads, railway tracks, airports, docks & harbors, factories, dams, barrages, canals, water supply schemes and sewerage systems, etc.

Civil Engineering is considered as the mother of all engineering disciplines as it is the process of directing and controlling natural resources for the use and benefit of mankind through construction of various projects.

A civil engineering graduate of UET Lahore has sufficient opportunities of getting jobs in various government/private departments i.e., Communication & Works (C & W), Water and Power Development Authority (WAPDA), Punjab Irrigation and Power Engineering Department, Civil Aviation Authority, Pakistan Railways, National Highway Authority (NHA), Lahore Development Authority (LDA), Water and Sanitation Agency (WASA), Public Health Engineering Department, National Engineering Services Pakistan (NESPAK), Associated Consultant Engineers (ACE), National Development Consultants (NDC), SKB Engineering & Construction, Descon

Engineering Limited and many more.

The Department of Civil Engineering was established in 1939 as a part of the Maclagan Engineering College, Lahore. Currently, it has an enrolment of over 1,000 students.

Due to the active participation by the students and faculty of this department, UET has been declared as American Concrete Institute outstanding University for the year 2014 and 2015.

Dr. Mubashir Hassan (Ex. Federal Finance Minister). Dr. Ahmad Jan Durrani (Ex. Vice Chancellor LUMS) and Dr. Engr. Shamsul Malik (Ex. Chairman WAPDA) are some of the famous alumni of the Civil Engineering Department.

### MISSION STATEMENT

To impart high quality Civil Engineering education through modern teaching and research for the national and international socio-economic development.

### PROGRAM EDUCATIONAL OBJECTIVES

To produce graduates who:

- Exhibit their proficiency of applying the knowledge (mathematics, science, and engineering) & skills (modern

tools) to solve complex engineering problem related to civil engineering.

- Exhibit effective communication, teamwork, leadership as complements to technical competence.
- Incorporate economic, environmental and sustainability considerations into the practice of civil engineering and are contributors to society through their problem solving capabilities.
- Demonstrate professionalism and uphold ethical values with integrity, and commitment to continue their life-long technical and professional development.

The Department has the following divisions to conduct its teaching and research programs:

- 1. Hydraulics and Irrigation Engineering**
- 2. Geotechnical Engineering**
- 3. Structural Engineering**

The Department offers B.Sc. Civil Engineering program at undergraduate level. In addition, following postgraduate level programs are also being offered:

- a) M.Sc. Hydraulics and Irrigation Engineering**
- b) M.Sc. Geotechnical Engineering**
- c) M.Sc. Structural Engineering**
- d) Ph.D. Civil Engineering**



## DEPARTMENT OF CIVIL ENGINEERING

In the Bachelor degree courses, emphasis is laid on the development of fundamental concepts and principles, which constitute the basis of Civil Engineering practice. To foster their creative abilities, the students are assigned projects on design, construction or laboratory investigations. Theory classes of different subjects are complemented by laboratory work, seminars and tutorials.

The classroom and laboratory work are supplemented with instructional tours to acquaint students with the Civil Engineering projects of national importance and with Survey Camp where they plan and execute survey of large areas independently.

### LABORATORIES AND OTHER FACILITIES

The Department has the following well-equipped laboratories, which meet the academic needs of students and teachers as well as the professional demands of the government and private organizations:

- Computer Center
- Concrete
- Earthquake Engineering
- Engineering Mechanics
- Geotechnical-Foundation Engineering

- Hydraulics & Irrigation Engineering
- Strength of Materials
- Surveying
- Test Floor
- Transportation Engineering

Civil Engineering Department in collaboration with National Engineering Services of Pakistan (NESPAK) has established a standard base line at the University Campus, which is used for calibration of surveying equipment/ instruments for various surveying organizations.

The Department has adequate research facilities for the postgraduate students and the faculty. Priority of the department has been towards solution of different problems faced by the public/private sectors in the field of Civil Engineering.

The faculty members are engaged in a variety of research works such as Low Cost Housing, Use of Indigenous Materials, Composite Space Structures, Towers, Soil Stability of Slopes, Soil Improvement Techniques, Determination of B. C, Pneumatic Techniques, Seepage, Control of Water Logging, Salinity Control, Sedimentation in Channels and Reservoirs, River Flood Hydraulics, Application of Geographical Information Systems in various fields of Civil Engineering,

Hydrological Modeling, Soil Erosion and Sediment Transport Modeling, Flood Modeling for Coastal Areas due to Climate Change, Offshore Hydraulics, Bond Strength of Ultra High Strength Concrete, Development and Use of FRP Materials, High Performance Concrete, Earthquake Risk Assessment & Retrofitting Techniques, Reliability Based Design and Development of Computer Software for Civil Engineering Problems. The Department frequently organizes seminars, workshops, national and international conferences on the topics of national importance related to Civil Engineering, where the faculty and the students actively participate.

Various public and private sector organizations frequently approach the Department for consultancy and advisory services. The Department has rendered services in completion of several mega projects such as design of Gomal University, Punjab Medical College and Islamabad Highway Bridges of CDA and retrofitting & risk assessment of earthquake affected buildings, etc. Furthermore, the Department offers testing services both in laboratory and in field for Civil Engineering projects for quality assurance.

## B.Sc. CIVIL ENGINEERING CURRICULUM – RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
CE-103	Construction Materials	3	0		ME-100L	Workshop Practice	0	1
CE-105	Civil Engineering Drawing	1	2		MA-112	Applied Mathematics-II	3	0
HU-111	Communication Skills	0	1		IS/HU-101	Islamic & Pak Studies/ Ethics - I	3	0
MA-111	Applied Mathematics-I	3	0		PHY-122	Basic Mechanics	2	1
EE-198	Basic Electrical Technology	1	1		CE-150	Computer Programming	2	1
ME-119	Basic Mechanical Technology	1	0		CE-101	Elementary Surveying	3	1
MinE-170	Basic Engineering Geology	2	0					
	Sub Total	15				Sub Total	17	
Year 2								
Code	Title (Pre-requisites)	Credit Hours			Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 3					Semester 4			
CE-201	Surveying and GIS-RS Applications	3	1		CE-205	Civil Engineering Construction & Graphics	2	1
CE-206	Social Sciences	0	1		CE-207	Engineering Economy & Construction Management	3	1
CE-212	Mechanics of Materials	3	1		CE-211	Elementary Structural Analysis	3	0
CE-231	Fluid Mechanics-I	3	1		CE-221	Geotechnical Engineering – I	3	1
MA-256	Probability and Statistical Processes	2	0		MA-240	Numerical Analysis	2	1
IS/HU-202	Islamic & Pak Studies / Ethics -II	3	0			Sub-Total	17	
	Sub-Total	18						
Year 3								
Code	Title (Pre-requisites)	Credit Hours			Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 5					Semester 6			
Mgt-300	Project Management	3	0		CE-312	Structural Mechanics	3	1
CE-311	Structural Analysis	2	0		CE-314	Plain & Reinforced Concrete-I	3	1
CE-313	Steel Structures	3	1		CE-331	Fluid Mechanics-II	3	1
CE-321	Geotechnical Engineering – II	3	1		CE-315	Hazards and Disaster Management	2	0
CE-332	Engineering Hydrology	2	1		HU-300	Technical Report Writing	3	0
	Sub Total	16				Sub Total	17	
Year 4								
Code	Title (Pre-requisites)	Credit Hours			Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 7					Semester 8			
CE-401	Structural Engineering	3	1		CE-431	Irrigation Engineering	3	1
CE-411	Plain Reinforced Concrete-II	3	1		CE-422	Design of Structures	2	1
CE-421	Transportation Engineering	3	1		CE-423	Pavement & Foundation Engineering	3	0
CE-424	Hydraulic Engineering	3	1		ENE-440	Environmental Engineering	3	1
CE-499	Project	0	3		CE-499	Project	0	3
	Sub Total	19				Sub Total	17	

# DEPARTMENT OF TRANSPORTATION ENGINEERING & MANAGEMENT

## Dean

Prof. Dr. Abdul Sattar Shakir

## Chairman

Prof. Dr. Ammad Hassan Khan

## Associate Professors

Dr. Zia-ur-Rehman

## Assistant Professors

Dr. Zahara Batool

Ms. Hina Saleemi

Ms. Saadia Tabassum

Mr. Mujasim Ali Rizvi

Dr. Irum Sanaullah

Mr. Bilal Zia Malik

Dr. Amna Chaudhry

Dr. Awais Shafique

## Lecturers

Mr. Abdur Rahim

Mr. Mohsin Raza

The Department of Transportation Engineering and Management is the youngest in the faculty of Civil Engineering. The department has distinction of being the first department in the nation to offer a formal B.Sc. degree course in Transportation Engineering. At present, the total enrollment of students is 169. Eleven sessions have already graduated.

The aim of this department is to improve the existing transportation infrastructure and to develop human resource in relevant field. This can be achieved by the application and development of advance technologies and developing/producing transportation professionals capable of planning, designing, constructing, managing, operating, and maintaining of various modes of transportation such as airways, seaways, highways, railways and pipeways.

## COURSES OF STUDY

The department offers the following courses of studies:

- **B.Sc. Transportation Engineering**
- **M.Sc. Transportation Engineering**
- **Ph.D. Transportation Engineering**

The emphasis of bachelor's degree course is on the understanding of the fundamental concepts and principles that constitute the basis of transportation engineering. The course consists of lectures, design/practical work, laboratory/field investigations, presentations and final year research project. Field survey camp is also a part of the B.Sc. degree program. The general areas include: Mathematics, Technical Drawing, Computer Programming, Probability and Statistics, Basic Civil and Environmental Engineering. The major core courses offered are: Construction Materials and Machinery, Geotechnical Engineering, Transportation Planning,

Transportation Engineering, Management and Practice, Transportation Economics, Multi-Modal Logistics, Transportation Modal Engineering, Highway Engineering, Traffic Engineering and Safety, Railway Engineering, Airport Engineering, Harbour and Dock Engineering, Pavement Design and Construction, Construction Management and Planning, Transportation Asset Management, GIS in Transportation Engineering.

The Master's degree course is offered as regular classes on a full-time basis. The emphasis is laid on introducing the modern trends/techniques and advanced knowledge in the field of transportation engineering.

The department also started the Ph.D. program in 2009. So far seven students are pursuing Ph.D. studies in Transportation Engineering.



# DEPARTMENT OF TRANSPORTATION ENGINEERING & MANAGEMENT



## LABORATORIES AND OTHER FACILITIES

The department has various dedicated laboratories including: Geo-materials, Transportation Materials Improvement, Transportation Computer Aided Design, Asphalt and Concrete Mix Design, Traffic Engineering, Motor Vehicle Examination, and is in a process of establishing Railway Engineering, and Geomatics Engineering. In addition, the other relevant laboratories required for teaching are shared with the Civil, Electrical, Mechanical, Environmental and Geological Engineering Departments. The department is using latest state-of-the-art software and tools for teaching and training purposes. The department has a well-stocked library with a large number of

latest relevant books, journals and research publications.

## TRAINING COURSES AND SEMINARS

The department organizes training courses/workshops and national/international seminars on regular basis. These activities are demand driven and are carried out for the students, faculty, private and governmental organizations.

## RESEARCH, CONSULTANCY AND COLLABORATION

Various public and private sector organizations frequently approach the department for consultancy services. The faculty members are actively engaged in research and regularly present/publish their papers in national and international conferences/seminars/journals. A "Research and Development Unit for Sustainable Urban Transport System" is being developed. Some of the major organizations that the department works in collaboration with includes: National Highway Authority (NHA), National Transport Research Center (NTRC), Pakistan Railways, Punjab Traffic Police, City Traffic Police Lahore, National Highway and Motorway Police (NH&MP), Lahore Chamber of Commerce and Industries (LCCI), Daewoo Pakistan Motorway Service Limited (DPMSL), Civil Aviation Authority (CAA), Chartered Institute of Logistic Transport Pakistan (CILT), All Pakistan Road User Association (ARUP), etc. The industry also offers scholarships, internships and practical

training to the students.

## MISSION

To play a leading role in teaching, research, innovation and commercialization that is internationally relevant and has direct bearing on national industrial, technological and socioeconomic development.

## PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

**PEO-01:** Prepare graduates who will be actively engaged in a professional career as a Transportation Engineer or pursuing advanced degrees.

**PEO-02:** Prepare graduates in Transportation Engineering for successful careers dealing with analysis, design and management of infrastructural projects both in Pakistan and abroad

**PEO-03:** Provide opportunities to students to work in interdisciplinary projects across the various branches of Transportation Engineering.

**PEO-04:** Provide students with a sound foundation in mathematical and scientific subjects which is a necessary prerequisite for a clear and sound understanding of Transportation Engineering as a whole and to encourage those students who are motivated to go for Postgraduate program.

**PEO-05:** Create an understanding among the student, the values of life-long learning and to inculcate in them professional ethics, moral values and social concern.

## B.Sc. TRANSPORTATION ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
CE-107	Technical Drawing	2	2		CE-101	Elementary Surveying	2	0
EE-199	Applied Electricity	3	1		CS-101	Computing Fundamentals	3	1
IS-101	Islamic & Pak Studies-I	3	0		TE-101	Social Science	3	1
MA-104	Applied Mathematics-I	3	0		HU-111	Communication Skills	0	1
TE-141	Intro. to Transportation Engineering	3	0		MA-105	Applied Mathematics-II	3	0
					ME-100L	Workshop Practice	0	1
					PHY-122/ CE-102	Basic Mechanics	2	1
	Sub Total	17				Sub Total	18	
Year 2								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 3					Semester 4			
TEM-201	Applied Engineering Geology	2	1		CE-213	Structural Analysis	3	1
CE-202	Surveying-II	3	2		HU-221	Technical Writing and Presentation Skills	3	0
CE-203A	Fluid Mechanics	3	1		TE-211	Transportation Engineering Practice	2	1
CE-212	Mechanics of Solids	3	1		TE-221	Probability and Statistical Methods	3	1
IS/Hu-202	Islamic/Ethics & Pak Studies	3	0		TE-243	Automotive Engineering	2	0
	Tutorial	0	0		TE-244	Geotechnical Engineering-I	3	0
	Sub-Total	19				Sub-Total	19	
Year 3								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 5					Semester 6			
CE-343	Engineering Hydrology	3	1		CE-314A	Plain and Reinforced Concrete	3	1
Geo-E-310	Engineering Geology	2	1		TE-302	Organizational Behavior	3	0
TE-351	Geotechnical Engineering-II	3	1		TE-352	Traffic Engineering-I	2	1
TE-361	Highway Engineering	3	1		TE-353	Bridge Engineering	2	1
					TE-354	Railway Engineering	2	1
	Sub Total	15				Sub Total	16	
Year 4								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 7					Semester 8			
TE-481	Environmental Impact Assessment and Management	2	0		TE-465	Geomatics Engineering and Transportation Asset Management	2	0
TE-464	Pavement Design and Construction	3	0		TE-466	Airport Engineering	3	1
TE-463	Transportation Planning and Economics	2	0		TE-467	Traffic Engineering-II	2	1
TE-462	Harbour and Dock Engineering	3	2		TE-468	Pipeway Engineering	2	0
TE-461	Tunnel Engineering	2	0		TE-469	Construction Management	2	1
ENE-407	Project	0	1		TE-482	Project	0	2
	Sub Total	15				Sub Total	16	

# INSTITUTE OF ENVIRONMENTAL ENGINEERING & RESEARCH

ENVIRONMENTAL ENGINEERING & RESEARCH

## Dean

Prof. Dr. Abdul Sattar Shakir

## Director

Prof. Dr. Sajjad H. Sheikh

## Assistant Professors

Dr. Muhammad Umar Farooq

Dr. Amir Ikhlaz

Ms. Mehwish Anis

Dr. Muhammad Irfan Jalees

Mr. Ghulam Hussain

## Lecturers

Ms. Gul-e-Hina

Mr. Haroon Rashid Mian



## INSTITUTE OF ENVIRONMENTAL ENGINEERING & RESEARCH

The Institute was established in the year 1972 to train professionals in the field on environmental engineering. Professionals were trained in the field of water supply, sewerage, water and waste-water treatment, solid waste management, air pollution control and environmental studies.

It is a World Health Organization (WHO) collaborative center for Environmental Health. Till 2004, its role remained as a post-graduate institute. In order to meet the increasing demand of professionals in the field of environmental engineering, undergraduate courses were started in year 2005. The Institute is one of the oldest and has pioneered the environmental engineering education in the entire Pakistan.

### COURSES OF STUDY

The following courses of study are offered at different levels:

- B.Sc. Environmental Engineering.
- M.Sc. Environmental Engineering.
- Ph.D. Environmental Engineering

### LABORATORIES & OTHER FACILITIES

The Institute has laboratory facilities in the following areas:

- Water Quality Testing
- Unit Processes

- Water Pollution Control
- Air Pollution Monitoring
- Sanitary Microbiology
- Heavy Metal Analysis
- Pesticides, insecticides and other organic compounds analysis

The Institute also has a library with a large number of books and journals on Environmental, and Public Health Engineering.

### RESEARCH EXTENSION AND ADVISORY SERVICES

In addition to the teaching programmes, the Institute is engaged in the multifaceted activities for advancement of environmental engineering in the country. Some of the research areas are as follows.

### RESEARCH & INVESTIGATION

Research and investigations in the area of Environmental and Public Health Engineering are conducted by MSc and PhD students and faculty members. Some of the research projects and studies have been sponsored by international agencies, public sector agencies and industries. These projects have played a vital role in finding practical solutions leading to the development of design criteria and guidelines particularly in the area of water quality management. Currently these design guidelines

are being effectively utilized by the public works departments in the implementation of environmental engineering systems.

### TRAINING PROGRAM & REFRESHER COURSES

The Institute offers numerous training programmes, and refresher courses for the in service personnel, and field engineers from various organizations, It also organizes national and international seminars, and symposia on issues of environmental engineering in the context of local requirements.

### CONSULTANCY & ADVISORY SERVICES

The institute offers advisory and consultancy services to industries, municipalities, and private organizations on a variety of environmental engineering issues such as:

- Water & wastewater testing, air pollution control, solid waste management, environmental impact assessment.
- Investigations of rural, and urban water supply, and sanitation systems.
- Planning and design of water & wastewater treatment facilities and feasibility studies of environmental engineering projects.

# INSTITUTE OF ENVIRONMENTAL ENGINEERING & RESEARCH

## MISSION

The Institute is to provide cross-disciplinary research, service-based learning and innovative course contents to produce graduates who will take a leading role in providing state of the art water and wastewater utility services. Give innovative and sustainable solution to the growing problems of municipal and industrial solid waste. Devise appropriate and low cost solution for wastewater treatment at the municipal level thus providing clean cities to the future generations of Pakistan. Able to analyze and provide custom solutions to complex problems related to environmental engineering, management and control. Work to provide clean cities and

## Program Educational Objectives (PEOs)

**PEO-01:** To make graduates able to analyze and solve complex environmental engineering problems by applying fundamental knowledge of mathematics, science, and engineering and make them able to

enhance their skills through professional growth and development activities such as postgraduate studies, research & professional registrations.

**PEO-02:** To produce graduates who will be competent for designing, analysis, research & investigation and development jobs within industry, govt. and private sectors working towards sustainable solutions in a wide array of technical specialties of environmental engineering.

**PEO-03:** To produce graduates who are sensitive to ethical and societal issues while applying their modern engineering and IT skills and tools in their professional work; and have the capability to demonstrate leadership, project management skills and meet strict timelines while working individually or in a team.

**PEO-04:** To make graduates able to uphold entrepreneurship and be equipped with technical and communication skills in order to provide services to society and environmental engineering profession at national and international levels.



## B.Sc ENVIRONMENTAL ENGINEERING - RECOMMENDED SCHEME OF STUDIES

Year 1								
Semester 1					Semester 2			
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
ME-100L	Workshop Practice	0	1	CS-101	Computing Fundamentals	2	1	
IS-101	I & P Studies/ E& P Studies-I	3	0	EnE-103	Environmental Chemistry	3	1	
CE-101	Elementary Surveying	3	1	HU-111L	Communication Skills	0	1	
EnE-102	Introduction to Environmental Engineering	3	0	MA-115	Engineering Mathematics	3	0	
PHY-112	Applied Physics	2	1	PHY-122	Basic Mechanics	2	1	
MA-116	Linear Algebra & Differential Equations	3	0	EE-140	Electrical Technology	2	1	
	Sub-Total	17			Sub-Total	17		
Year 2								
Semester 3					Semester 4			
IS-201	I & P Studies/ E & P Studies-II	3	0		EnE-201	Environmental Microbiology	2	1
EnE-202	Ecological Management	2	0		CE-210	Structural Systems	3	0
CE-231	Fluid Mechanics	3	1		HU-221	Technical Writing and Presentation Skills	3	0
CE-235	Soil Mechanics	3	1		TEM-225	Transportation Engineering	2	1
HU-240	Psychology	2	0		ME-238	Thermodynamics	2	1
MA-242	Engineering Statistics	3	0		CE-240	Engineering drawings and CAD	1	2
	Sub-Total	18				Sub-Total	18	
Year 3								
Semester 5					Semester 6			
CRP-301	Sustainable urban Planning	2	0		CRP-302	GIS and Remote Sensing (CS-101)	2	1
EnE-301	Water Supply and Wastewater Engineering	3	1		EnE-304	Principles of Water and Wastewater Treatment	3	1
EnE-302	Environmental Economics	2	0		ChE-320	Cleaner Production Techniques	2	0
EnE-303	Solid Waste Management	3	1		CE-345	Water Resources & Irrigation Engineering	3	0
EnE-306	Environmental Engineering Lab Techniques (EnE-103)	1	2		CE-346	Project Planning and Management and Construction Supervision	3	0
CE-332	Engineering Hydrology	2	1		MA-346	Numerical Methods	3	0
	Sub-Total	18				Sub-Total	18	
Year 4								
Semester 7					Semester 8			
EnE-402	Air and Noise Pollution Control and Climate Change	3	1		EnE-406	Water and Wastewater Treatment Plant Design (EnE-304)	3	1
EnE-409	Environmental Modeling	2	1		EnE-407	Environmental Impact Assessment and Management	3	0
EnE-410	Industrial Waste Abatement and Management	3	0		EnE-408	Wastewater Disposal and Reuse	2	0
ME-481	Energy Resources & Management	2	0		ChE-452	Environmental Health & Safety	3	0
EnE-499L	Final Year Project-I	0	3		EnE-499	Final Year Project-II	0	3
	Sub-Total	15				Sub-Total	15	



## DEPARTMENT OF ARCHITECTURAL ENGINEERING & DESIGN

### **Dean**

Prof. Dr. Abdul Sattar Shakir

### **Chairman**

Prof. Dr. Muhammad Arif Khan

### **Assistant Professors**

Mr. Imran Ahmad Saeed

Mr. Amad Anwar

Dr. Khuram Rashid

Dr. Amna Ch.

Dr. Maria Idrees

### **Lecturers**

Ms. Tahreem Naseer

Ms. Arjmand Khaliq

Ms. Alina Mehmood

Ms. Anum Fatima

Ms. Sidra Jamshed

Mr. H Abrar Ahmed

Mr. Abdul Mueed Iqbal

Ms. Afia Razzaq

Ms. Huda Riaz

ARCHITECTURAL ENGINEERING & DESIGN

## DEPARTMENT OF ARCHITECTURAL ENGINEERING & DESIGN



The department of Architectural Engineering and Design was established first time in Pakistan at University of Engineering and Technology Lahore in the year 2001. The department is offering;

- B.Sc. Architectural Engineering
- M.Sc. Architectural Engineering,
- M.Sc. Integrated Building Design
- PhD in Architectural Engineering

The Architectural Engineering program is a blend of Architecture and Engineering and the emphasis of the Program is to give quality education to the students and prepare them for the building industry of Pakistan as successful professionals with innovative and multi-disciplinary approach. The department has enrollment of average 50 students per batch in undergraduate program. The Graduates of Architectural



Engineering are working in various national/international organizations and enjoying good repute. The demand of Architectural Engineers has increased rapidly during last few years resulting 100% absorption of graduates in private and public sector organizations and upgradation of admission merit. Presently the merit position of the Architectural Engineering program is at 8th out of nineteen undergraduate programs at UET.

An Architectural Engineer having background of multidisciplinary knowledge on various areas of buildings has a greater opportunity to work according to his aptitude. The most prominent areas of curriculum include Building Structures, HVAC system of Buildings, Electrical System of Buildings (Lighting and Illumination), Building Construction, Energy Efficient Buildings, Integrated Building

Design, Green Buildings, Project Management, Fire Safety, Acoustics of Buildings, Materials of Construction, and Conservation of Historical Buildings. Students have choice to select the field of their interest by studying elective courses in 7th & 8th semester and final year project in the same area. This conforms with the offering of specialized field in Architectural Engineering Program at various international universities. The department has adopted Outcome Based Education (OBE) system since 2015.

The department has faculty from various disciplines including Architecture, Architectural Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering and Environmental Engineering. The department has a dedicated library, three Digital Studios and six laboratories including Structural Engineering Lab, Construction Lab, Geo-Technical Engineering Lab, Survey Lab, Environmental Control Systems Lab and Electrical Lab.





## DEPARTMENT OF ARCHITECTURAL ENGINEERING & DESIGN

### MISSION

To give quality education in architectural engineering with innovative & multi-disciplinary approach for sustainable solutions to meet the requirements of building industry and societal benefits.



### Program Educational Objectives (PEOs)

To be achieved by the graduates after five years of graduation.

**PEO-01:** Have fundamental engineering knowledge and concepts in various building areas including Architecture, Structure, HVAC, Lighting & Illumination, Water Supply & Sanitation, Energy Efficiency, Materials, Construction & Management and have established expertise in any of these fields.

**PEO-02:** Have knowledge to solve complex engineering problems with systematic approach and suggest multiple solutions considering aspects of economy and sustainability.

**PEO-03:** Have capacity to use modern engineering and Information Technology tools for investigation and analysis of problems.

**PEO-04:** Be capable of working efficiently as team leaders, as team members and independently or as self-employer with effective communication skills, management techniques and professional ethics.

**PEO-05:** Aware of the continuous development & growth in innovation & technical knowledge and also step into Research and Development (R&D) effectively for self-improvement and societal benefits.



List of Elective Subjects

Course Code	Subject	Credit Hours	
		Theory	Practical
AE 433	Design of Concrete Structures	1	1
AE 435	Long Span Structures	1	1
AE 452	Project Risk Management	1	1
AE 454	Construction Project Scheduling	1	1
AE 411	Building Materials & Construction-IV	1	1
AE 412	Building Materials & Construction-V	1	1
AE 421	Plumbing Design for Buildings	1	1
AE 422	Energy Efficient Building	1	1
AE 423	HVAC System for Buildings	1	1



## B.Sc. ARCHITECTURAL ENGINEERING & DESIGN - RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
AE 100	Introduction to Architectural Engineering	1	0		HU 100L	Communication Skills	0	1
AE 101	Surveying	2	1		CS 101	Introduction to Computing	2	1
IS 101	Islamic and Pak Studies-I	3	0		PHY 102	Physics for Architectural Engineers	2	1
MA 102	Linear Algebra & Differential Eq.	3	0		PID/AE 107	Workshop on Model Making	0	1
AE 111	Building Materials & Construction-I	2	1		AE 110	History of Building Technology	1	1
AE 141	Architectural & Engineering Drawing	1	2		AE 112	Building Materials & Construction-II	2	1
					AE 131	Mechanics of Structures-I	3	1
	Sub-Total	16				Sub-Total	17	
Year 2								
Semester 3					Semester 4			
IS 201	Islamic and Pak Studies-II	3	0		MA 215	Mechanics and Statistics	3	0
MA 108/208	Engineering Mathematics	3	0		AE 221	Hydraulics for Architectural Engineers	2	1
AE 211	Building Materials & Construction-III	2	1		AE 222	Environmental Control Systems	3	1
AE 231	Mechanics of Structures-II	3	1		AE 232	Mechanics of Structures-III	3	1
AE 241	Architectural Design-I	1	2		AE 242L	Architectural Design-II	0	3
	Sub-Total	16				Sub-Total	17	
Year 3								
Semester 5					Semester 6			
AE 321	Water Supply & Sanitation System for Buildings	3	1		HU 300	Technical Report Writing	3	0
AE 322	Electrical Systems for Buildings	2	1		AE 323	Mechanical Systems for Buildings	3	1
AE 331	Structural Design-I	3	1		AE 324	Lighting & Illumination	2	1
AE 341L	Architectural Design-III	0	1		AE 332	Structural Design-II	3	1
AE 361	Geotechnical Engineering	3	1		AE 362	Foundation Engineering	3	1
CS 3XX	Computer Programming & Numerical Analysis	1	1					
	Sub-Total	18				Sub-Total	18	
Year 4								
Semester 7					Semester 8			
AE 431	Computer Aided Structural Analysis	3	1		AE 434	Structural Dynamics & EQ Engineering	3	1
AE 432	Design of Steel Structures	3	1		AE 442	Integrated Building Design-II	1	2
AE 441	Integrated Building Design-I	0	2		AE 453	Construction Management	3	1
AE 451	Estimation & Quantity Surveying	1	1		AE	Elective-II	1	1
AE-XXX	Elective-I	1	1		AE 472L	Project	0	3
AE 471L	Project	0	3					
	Sub-Total	17				Sub-Total	16	

# FACULTY OF CHEMICAL ENGINEERING

Department of Chemical Engineering  
Department of Polymer & Process Engineering  
Department of Metallurgical & Materials Engineering



## DEPARTMENT OF CHEMICAL ENGINEERING

### CHEMICAL ENGINEERING

#### **Dean**

Prof. Dr. Nadeem Feroze

#### **Chairman**

Prof. Dr.–Ing. Naveed Ramzan

#### **Professors**

Dr. Muhammad Zafar Noon  
Dr. Syed Hassan Javed Naqvi

#### **Professor on SNGPL Chair of Gas Engineering**

Dr. –Ing. Naveed Ramzan

#### **Assistant Professors**

Mr. Zaka-ur-Rahman  
Mr. Humayun Wali  
Dr. Muhammad Faheem  
Dr. Hafiz Muhammad Zaheer Aslam  
Mr. Umair Aslam  
Dr. Usman Ali  
Dr. Syed Zaheer Abbas  
Dr. Muhammad Wasim Tahir  
Dr. Anem Asghar

#### **Lecturers**

Mr. Muhammad Usman  
Mr. Haseeb Ullah Khan Jatoi  
Mr. Rizwan Ali  
Ms. Kanwal Shabbir



## DEPARTMENT OF CHEMICAL ENGINEERING

### MISSION

The mission of the Undergraduate program of the Department of Chemical Engineering encompasses three (3) key aspects:

#### 1. Education:

To offer an outstanding academic program to enable graduates master process synthesis, design, and operations' knowledge and develop excellent technical, technological, and leadership skills

#### 2. Research:

To provide a vibrant interdisciplinary research program in engineering science, creating novel and sustainable solutions to serve public interests in areas such as health, energy, and environment

#### 3. Social Responsibility:

To promote inclusive, safe, collaborative, and respectful community for learning and work with integrity

### Program Educational Objectives (PEOs)

The Department of Chemical Engineering has defined the following four (4) PEOs for its Undergraduate program:

**PEO-01:** To prepare graduates with strong technical education for practicing and applying the principles of Chemical Engineering and with excellent communication skills to enable them have successful careers in a variety of industrial and professional environments.

**PEO-02:** To prepare graduates for

rapidly changing technological environment with the core knowledge central to multidisciplinary development and personal improvement throughout their professional careers.

**PEO-03:** To enable graduates pursue continued lifelong learning through professional practice, further graduate education, or other training programs in engineering sciences or other professional fields.

**PEO-04:** To enable graduates achieve professional success with an understanding and appreciation of ethical behavior, social responsibility, and diversity, both as individuals and in team environments.



## DEPARTMENT OF CHEMICAL ENGINEERING

### HISTORY OF DEPARTMENT

The Department of Chemical Engineering was established in 1962 at this University and is the first institution to offer Bachelor's, Master's, and Doctoral degree programs in Chemical Engineering in the country. Currently, it has an enrollment of about 400 students pursuing undergraduate studies. The Department started M.Sc. Chemical Engineering degree program in 1970, and since then, the postgraduate program has been on the road to progress. At present, there are more than 120 students pursuing M.Sc. studies. In addition, 17 scholars are pursuing their Ph.D. degrees in different areas of Chemical Engineering.

### COURSES OF STUDY

The Department offers courses of study leading to the following degrees:

- **B.Sc. Chemical Engineering**
- **M.Sc. Chemical Engineering**
- **Ph.D. Chemical Engineering**

The curriculum for the Bachelor's course has evolved over a number of years and is designed to prepare the students for design, operation, and supervision of chemical process plants as well as for research and development work in process industry. Study tours and



inspection trips are an essential component of the curriculum, which enable the students to visit industrial plants and projects of national importance in chemical industry. The students are assigned projects involving design and other aspects of Chemical Engineering. Emphasis is given to the use of computers in problem solving and design of equipment and plants.

The Master's course is offered on a full time basis. The full time course is of one year duration comprising three terms of four months each. First term is devoted to advanced

Chemical Engineering subjects while second term focuses on specialized courses. In third term, students undertake a research project and prepare their dissertation/thesis.

For Ph.D. degree, students undertake supervised research work for a minimum period of three years. Original research contributions are expected for the successful completion of the degree. On completion of research work, a thesis has to be submitted. Ph.D. degree is awarded after international review and approval of thesis by board of examiners.

### LABORATORIES AND OTHER FACILITIES

The Department has well-equipped and well-maintained laboratories in the following fields:

- Chemical Engineering Thermodynamics
- Chemical Reaction Engineering
- Computer Applications and Process Simulation
- Energy Engineering
- Environmental Engineering
- Fluid Flow
- Heat Transfer
- Instrumental Analysis
- Instrumentation and Control
- Mass Transfer
- Process/Wet Analysis

## DEPARTMENT OF CHEMICAL ENGINEERING

The Instrumental Analysis laboratory is equipped with state-of-the-art equipment including Atomic Absorption Spectrophotometer, Bomb Calorimeter, Elemental Analyzer, Fourier Transform Infrared Spectrophotometer (FTIR), Gas Chromatograph (GC), High Performance Liquid Chromatograph (HPLC), and Ultraviolet (UV) Spectrophotometer.

The Department has a computer center equipped with latest systems. Apart from learning computer languages and applications in various courses of Chemical Engineering, the students are encouraged to use this laboratory for their design projects, research dissertations, and class assignments.

The Department has a well-organized library with a large number of textbooks, handbooks, reference books, journals, design projects, and research thesis submitted in the past. Latest publications are regularly added to the collection to cope with the modern research in the field.

### LIASION WITH CHEMICAL INDUSTRY

The Department has strong collaboration and linkage with the chemical industry. As a result, the

Department has developed constructive and problem solving links with some major organizations including:

- Dawood Hercules Chemicals
- DESCON
- ENGRO Corporation
- Fatima Fertilizer
- Fauji Fertilizer Company
- ICI Pakistan
- OGDCL
- PARCO
- SNGPL

The exchange of senior staff members for mutual benefits, a number of scholarships for undergraduate and postgraduate students, facilities for practical training and research support are some of the features of such collaboration. SNGPL has sponsored a Chair on Gas Engineering in the Department.

### RESEARCH EXTENSION AND ADVISORY SERVICES

The Department is engaged in a number of research projects of industrial and theoretical significance under its postgraduate and faculty research programs in areas such as pollution control, energy management, process development, unit operations and process simulation. The outcome of this research is regularly published in journals of repute and receives

recognition from the internal community of chemical engineers. 50 publications have been published in HEC recognized and international journals in last 5 years. The Department also offers a variety of advisory and consultancy services to the local industry and entrepreneurs. Some of the areas where the Department can render assistance are:

- Alternative energy technology development
- Ergonomics of engineering projects and waste minimization
- Feasibility studies of chemical projects
- Industrial pollution monitoring, management, control, and recycling
- Industrial testing and chemical analysis
- Process safety and risk analysis

### SPONSORED PROJECTS

A number of sponsored research projects are being pursued in the Department. Current SNGPL funded projects include:

- Design and development of local solar water heater
- Development of household gasifiers
- Efficiency enhancement of domestic gas stoves
- Energy from biomass (biomass densification)
- Energy audit of gas power plant



## B.Sc. CHEMICAL ENGINEERING CURRICULUM

Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
1. Knowledge Area — Humanities (10 Credit Hours)			
HU-111	Communication Skills	0	1
HU-221	Technical Writing and Presentation Skills	3	0
IS-101	Islamic and Pakistan Studies–I	3	0
IS-201	Islamic and Pakistan Studies–II	3	0
2. Knowledge Area — Management (6 Credit Hours)			
ChE-309	Chemical Engineering Economics	3	0
ChE-408	Engineering Management	3	0
3. Knowledge Area — Natural Sciences (16 Credit Hours)			
CY-142	Physical and Analytical Chemistry	2	1
CY-221	Inorganic and Organic Chemistry	2	1
MA-113	Calculus and Analytic Geometry	3	0
MA-118	Applied Mathematics and Statistics	3	0
MA-233	Applied Mechanics	0	1
PHY-113	Applied Physics	2	1
4. Knowledge Area — Computing (8 Credit Hours)			
ChE-407	Process Modeling and Simulation	1	1
CS-101	Computing Fundamentals	2	1
MA-240	Numerical Analysis	2	1
5. Knowledge Area — Engineering Foundation (25 Credit Hours)			
ChE-101	Industrial Stoichiometry–I	3	0
ChE-102	Fluid Mechanics	3	0
ChE-201	Industrial Stoichiometry–II (ChE-101)	3	0
ChE-204	Chemical Engineering Thermodynamics–I	3	0
ChE-205	Heat Transfer Fundamentals	3	0
ChE-206	Mass Transfer Fundamentals	3	0
ChE-301	Chemical Reaction Engineering (ChE-201)	3	1
ChE-302	Chemical Engineering Mathematics (MA-118)	3	0

Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
5. Knowledge Area — Engineering Foundation (31 Credit Hours)			
EE-140	Electrical Technology	2	1
ME-100L	Workshop Practice	0	1
ME-122L	Engineering Drawing	0	2
6. Knowledge Area — Major Based Core (Breadth) (25 Credit Hours)			
ChE-103	Chemical Process Industries	3	1
ChE-203	Particle Technology	3	1
ChE-207	Engineering Materials	2	0
ChE-303	Unit Processes	3	1
ChE-308	Energy Engineering (ChE-205)	3	1
ChE-404	Instrumentation and Control (ChE-302)	3	1
ChE-405	Maintenance Engineering	3	0
7. Knowledge Area — Major Based Core (Depth) (27 Credit Hours)			
ChE-202	Fluid Dynamics (ChE-102)	3	1
ChE-304	Chemical Engineering Thermodynamics–II (ChE-204)	3	1
ChE-305	Process Heat Transfer (ChE-205)	3	1
ChE-306	Separation Processes (ChE-206)	3	1
ChE-307	Transport Phenomena (ChE-202)	3	0
ChE-401	Chemical Reactor Design (ChE-301)	2	0
ChE-402	Simultaneous Heat and Mass Transfer (ChE-306)	3	0
ChE-403	Chemical Engineering Plant Design (ChE-305, ChE-306)	3	0
8. Knowledge Area — Interdisciplinary Engineering Breadth (7 Credit Hours)			
ChE-406	Environmental Engineering	3	1
ChE-4XX	Elective	3	0
9. Knowledge Area — Senior Design Project (6 Credit Hours)			
ChE-411	Plant Design Project–I	0	3
ChE-412	Plant Design Project–II (ChE-411)	0	3

## B.Sc. CHEMICAL ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1							
Code	Title	Credit Hours		Code	Title	Credit Hours	
		Theory	Lab			Theory	Lab
Semester 1				Semester 2			
ChE-101	Industrial Stoichiometry–I	3	0	ChE-102	Fluid Mechanics	3	0
CS-101	Computing Fundamentals	2	1	ChE-103	Chemical Process Industries	3	1
CY-142	Physical and Analytical Chemistry	2	1	IS-101 or HU-101	Islamic and Pakistan Studies–I or Ethics and Pakistan Studies–I	3	0
HU-111	Communication Skills	0	1	MA-118	Applied Mathematics and Statistics	3	0
MA-113	Calculus and Analytic Geometry	3	0	ME-100L	Workshop Practice	0	1
ME-122L	Engineering Drawing	0	2	PHY-113	Applied Physics	2	1
	Sub-Total	15			Sub-Total	17	
Year 2							
Semester 3				Semester 4			
ChE-201	Industrial Stoichiometry – II	3	0	ChE-202	Fluid Dynamics	3	1
ChE-203	Particle Technology	3	1	ChE-205	Heat Transfer Fundamentals	3	0
ChE-204	Chemical Engineering Thermodynamics – I	3	0	ChE-206	Mass Transfer Fundamentals	3	0
CY-221	Inorganic and Organic Chemistry	2	1	ChE-207	Engineering Materials	2	0
HU-221	Technical Writing and Presentation Skills	3	0	EE-140	Electrical Technology	2	1
MA-233	Applied Mechanics	0	1	IS-201 or HU-201	Islamic and Pakistan Studies-II or Ethics and Pakistan Studies-II	3	0
	Sub-Total	17			Sub-Total	18	
Year 3							
Semester 5				Semester 6			
ChE-301	Chemical Reaction Engineering	3	1	ChE-305	Process Heat Transfer	3	1
ChE-302	Chemical Engineering Mathematics	3	0	ChE-306	Separation Processes	3	1
ChE-303	Unit Processes	3	1	ChE-307	Transport Phenomena	3	0
ChE-304	Chemical Engineering Thermodynamics – II	3	1	ChE-308	Energy Engineering	3	1
MA-240	Numerical Analysis	2	1	ChE-309	Chemical Engineering Economics	3	0
	Sub-Total	18			Sub-Total	18	
Year 4							
Semester 7				Semester 8			
ChE-401	Chemical Reactor Design	2	0	ChE-405	Maintenance Engineering	3	0
ChE-402	Simultaneous Heat and Mass Transfer	3	0	ChE-406	Environmental Engineering	3	1
ChE-403	Chemical Engineering Plant Design	3	0	ChE-407	Process Modeling and Simulation	1	1
ChE-404	Instrumentation and Control	3	1	ChE-412	Plant Design Project – II	0	3
ChE-408	Engineering Management	3	0	ChE-421	Gas Engineering	3	0
ChE-411	Plant Design Project-I	0	3				
	Sub-Total	18			Sub-Total	15	

Elective Subjects

Code	Title	Credit Hours		Code	Title	Credit Hours	
		Theory	Lab			Theory	Lab
ChE-421	Gas Engineering	3	0	ChE-424	Nuclear Engineering	3	0
ChE-422	Biochemical Engineering	3	0	ChE-425	Computer Aided Design	3	0
ChE-423	Nanotechnology in Chemical Engineering	3	0	ChE-426	Process Analysis and Optimization	3	0

# DEPARTMENT OF POLYMER & PROCESS ENGINEERING

## POLYMER & PROCESS ENGINEERING

### DEPARTMENT OF POLYMER & PROCESS ENGINEERING

### DEPARTMENT OF POLYMER & PROCESS ENGINEERING

#### **Dean**

Prof. Dr. Nadeem Feroze

#### **Chairman**

Prof. Dr. Asif Ali Qaiser

#### **Assistant Professors**

Dr. Atif Javaid

Dr. M. Shafiq Irfan

Dr. Yasir Qayyum Gill

Dr. Farhan Saeed

Dr. Muhammad Sarfraz

Dr. Rabia Nazar

#### **Lecturers**

Mr. Anwar ul Haq Khan

Mr. Najam ur Rehman



## DEPARTMENT OF POLYMER & PROCESS ENGINEERING

### INTRODUCTION

The Degree program in Polymer Engineering was launched in 2002 under Polymer Engineering Division in Department of Chemical Engineering with an intake of 35 students. As a result of a far-reaching ambition, and keen vision which led to the realization of the increasing important role that Polymer Engineering plays in the world today, the University rightly decided to upgrade the Division into an independent degree awarding Department of Polymer and Process Engineering in January 2006. The Department has already gained considerable prestige and standing in the academic and industrial world due to motivated and outstanding faculty, hardworking and dedicated administration and state-of-the-art laboratories costing more than 100 million rupees.

### PROGRAMS OFFERED

The Department offers the following degree programs:

- a) **B.Sc. Polymer Engineering**
- b) **M.Sc. Polymer and Process Engineering**
- c) **Ph.D. Polymer and Process Engineering**

### MISSION

To inculcate application-oriented knowledge of polymer engineering so that the graduates should serve the industrial and research sectors with



their developed analytical and design abilities showing high moral values and professional competency.

### Program Educational Objectives (PEOs)

**PEO-01: Technical Proficiency:** Graduates will be technically competent and creative in all major aspects of polymer and process engineering as well as supporting math and science disciplines, allowing these graduates to conduct experiments and test, solve problems based on data from these experiments, design new products, materials and processes, all with a commitment to quality, timeliness, and continuous improvement.

**PEO-02: Interpersonal Skills and Management:** Graduates will exhibit appropriate interpersonal and managerial skills by showing flexibility and adaptability in the workplace, possess capacity to embrace new opportunities of emerging technologies, and embrace leadership and teamwork opportunities, all affording sustainable engineering

careers.

**PEO-03: Work ethics:** Graduates will exhibit professional work ethics including an interest in personal and professional growth.

**PEO-04: Awareness of Societal Impact:** Graduates will be aware of how their professional role will impact the global community and will act with global, ethical,

societal, ecological, and commercial awareness expected of practicing engineering professionals.

**PEO-05: Effective Communication:** Graduates will be skilled in written and oral communication to effectively convey technical content.

### PROGRAM DESIGN

The degree program in Polymer Engineering was designed to build on the current activities in the field and to provide a nucleus for the University's rapidly expanding industrially orientated research training and consultancy in polymer science and engineering.

The basic motive is to utilize the University's initiative in areas of multi-disciplinary polymer related research. In order to ensure that the high quality education in Polymer Engineering is available to undergraduates, and in keeping with the mission of the University, the following core values have been the main focus in the design of courses.

## DEPARTMENT OF POLYMER & PROCESS ENGINEERING

1. Graduates will be able to analyze structure-property relationships in all forms of polymers and composite materials, and understand how these properties are affected by manufacturing methods.

2. Graduates will have the necessary foundation in mathematics, physical sciences, and engineering to pursue advanced degrees in polymers and related disciplines.

3. Graduates will acquire through, research projects, and general studies the required skills for problem solving, critical thinking, and communication that will make them successful in their chosen careers.

4. Graduates will develop necessary skills which will help them their careers.

### RESEARCH THRUST AREAS

The Department emphasizes research and practical experience in curriculum along with strong theoretical basis. Our research focuses on fundamental and strategic issues relating to Polymer Engineering. The Polymer Engineering laboratories form an academic technical center, dedicated to internationally-recognized fundamental research on:

- Polymer Synthesis and Modification
- Polymer Processing and Fabrication
- Polymer Rheology and Viscoelasticity
- Advanced Multi-functional Composites
- Polymer Processing Simulation
- Polymer Characterization
- Electrochemical Characterization

- Membrane Synthesis and Characterization
- Elastomer Compounding

All these areas have applications and relevance to the polymer manufacturing industry and various research organizations in the public sector. Our goals are to advance scientific and engineering knowledge in these areas, to disseminate the information, and to transfer this knowledge to the industry. Many aspects of our research are interdisciplinary by nature, involving fruitful collaboration with other academic areas across traditional academic boundaries.

### LABORATORIES AND OTHER FACILITIES

Our laboratories fall into four categories:

1. Undergraduate Teaching Laboratories
2. Research Laboratories
3. Industrial Testing and Product Development Laboratories
4. Process Engineering Laboratories

#### 1. Undergraduate Teaching Laboratories

- Fundamentals of Polymer Engineering
- Polymer Analysis & Characterization
- Polymer Structures & Synthesis
- Polymer Processing Design
- Polymer Reaction Engineering
- Rubber Compounding and Processing
- Simulation in Polymer Processing

### 2. Research Laboratories

- Polymer Synthesis & Modification
- Polymer Analysis & Characterization
- Polymer Testing
- Advanced Polymer Composites and Blends
- Conducting Polymer & Membrane Research

### 3. Industrial Testing & Product Development

- Plastic Pipe Testing and Quality Assurance
- PE Film Testing
- Plastic Materials and Products Testing under ASTM, ISO & PS Standards

### 4. Process Engineering Laboratories

- Process Heat Transfer
- Particle Technology
- Fluid Flow
- Process Engineering Computing
- Mass Transfer
- Instrumentation & Control

These laboratories are most modern and employ state-of-the-art technology to gain insight into the complex processes and to facilitate precise measurements. These laboratories house a wide range of characterization and testing instruments such as Gel Permeation Chromatography (GPC), Fourier Transform Infra-Red Spectroscopy (FTIR), Differential Scanning Calorimeter (DSC), Brabender Plasti-Corder® Measuring Mixer, Elemental Analyzer (C/H/N/O/S), Universal

## DEPARTMENT OF POLYMER & PROCESS ENGINEERING

Universal Testing Machine (UTM), Brookfield Rheometer, UV-Vis Spectrometer, Hardness and Electrical conductivity testers, Electrochemical Workstation (Potentiostat), Dynamic Mechanical Thermal Analyzer (DMTA), Thermal Gravimetric Analyzer (TGA), HDT/VICAT and Izod/Charpy Impact testers.

### LEARNING RESOURCE CENTER

Department of Polymer & Process Engineering has established a well-equipped Learning Resource Center (LRC). It is based upon the concept of providing integrated resources at one place. The Learning Resource Center has large number of text books, reference material, handbooks, data books, research journals, design projects, electronic books, animations of complex engineering phenomena and lectures of eminent professors from reputed universities.

### UNIVERSITY-INDUSTRY LINKAGE

At the Department, we believe that universities always have been the centers of scholarship. Today, they have to extend their function and fully integrate research, education and innovation, and attract other centers of knowledge into cooperation. Research and thus postgraduate studies, have to be more focused on industrial problems. The Department is working relentlessly to establish a meaningful and productive link with prominent polymer related industries. The broad framework of cooperation is as follows:

### 1. Area of interest at the Department:

- Process Equipment Design and Simulation
- Process Analysis and Troubleshooting
- Development and Complete Characterization regarding:
  - a) Thermoplastics and Thermosets Compounds
  - b) Elastomeric Materials
  - c) Polymeric Composites
  - d) Advanced Multifunctional Polymers
- Training Workshops, Seminars and Courses at various levels for industries.

### 2. Industrial Contribution

- Industrial Training and Internships for students
- Enhancement of Laboratory Facilities
- Scholarships for students
- Research Projects leading to M.Sc. and Ph.D. degrees
- Funded Industrial Research

### 3. Modes of Interaction

- Direct Liaison on Specific Project Basis
- Collaboration through HEC-Industry Linkage Programme

### COLLABORATING INDUSTRIES

The Department has signed Memorandum of Understandings (MOUs) with some of the leading industries. In response, we provide industrial research and testing facilities to these industries. Industries also



provide practical knowledge to our graduates after hiring them as interns. Some of the major industries entering into agreement with the Department include:

- Packages (Pvt.) Ltd.
- SPELL Group of Industries
- Lucky Plastics
- Fiber Tech Composites
- Popular Pipes
- Forward Sports
- T. M. Rubbers
- Awan Sports
- International Polymer Industries (Pvt.) Ltd.
- Tariq Pipe Industries (Minhas Pipes)

The Department is working on the future collaboration and many more linkages are expected in near future.

### Strong Internship Program

The productive collaboration with industry has resulted in ample internship opportunities for our students. The Department provide 100 % Internship to its seniors and many juniors, as well.



## B.Sc. POLYMER ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
PPE-101	Engineering & Polymeric Materials	3	0		PPE-102	Fundamentals of Polymer Engineering	3	1
PPE-103	Industrial Stoichiometry	3	1		PPE-104	Particle Technology	2	1
CS 101	Computing Fundamentals	2	1		PPE-106	Fluid Flow	3	1
CY 161	Polymer Chemistry-I	2	1		MA-118	Applied Mathematics & Statistics	3	0
MA 113	Calculus and Analytical Geometry	3	0		HU 111L	Communicational Skills	0	1
					IS 101	Islamic / Ethics and Pakistan Studies I	3	0
	Sub-Total	16				Sub-Total	18	
Year 2								
Semester 3					Semester 4			
PPE-201	Polymer Structures & Synthesis	3	1		PPE-105	Petroleum Refining & Petrochemical Engg	3	0
PPE-202	Polymer & Process Industries	3	0		PPE-205	Mass Transfer	3	1
PPE-203	Chemical Engineering Thermodynamics	3	0		PPE-206	Environmental Engineering & Process Safety	3	0
PPE-204	Heat Transfer	3	1		PPE-302	Polymer Reaction Engineering	3	1
IS 201	Islamic / Ethics and Pakistan Studies II	3	0		HU 221	Technical Writing & Presentation Skills	3	0
ME 100L	Workshop Practice	0	1					
	Sub-Total	18				Sub-Total	17	
Year 3								
Semester 5					Semester 6			
PPE-301	Mechanical Properties of Polymers	3	0		PPE-303	Polymer Compounding	3	0
PPE-305	Polymer Thermodynamics	3	0		PPE-304L	Simulation in Polymer Processing	2	1
PPE-307	Transport Phenomena	3	0		PPE-306	Polymer Analysis & Characterization	3	1
PPE-309	Process Engineering Computing	2	1		PPE-308	Polymer Processing Design	3	1
PPE-311	Engineering Economics	3	0		PPE-310	Instrumentation & Control	3	1
MA-346	Numerical Methods	3	0					
	Sub-Total	18				Sub-Total	18	
Year 4								
Semester 7					Semester 8			
PPE-401	Polymer Rheology	3	0		PPE-402	Polymer Product Design	3	0
PPE-403	Process Plant Design	3	1		PPE-404L	Plant Design Practice	0	3
PPE-405	Final Year Project-I	0	3		PPE-406	Final Year Project-II	0	3
PPE-407	Polymer Composites	3	0		PPE-408	Smart Polymers	3	0
PPE-312	Engineering Management	3	0		MGT 413	Entrepreneurship	3	0
	Sub-Total	16			Sub-Total	15		

## DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

METALLURGICAL & MATERIALS ENGINEERING

Department of  
Metallurgical and  
Materials Engineering

### **Dean**

Prof. Dr. Nadeem Feroze

### **Chairman**

Prof. Dr. Akhlaq Ahmad Malik

### **Professors**

Dr. Gul Hameed Awan

Dr. Liaqat Ali Kasuri

### **Associate Professors**

Dr.-Ing. Furqan Ahmed

Dr. Muhammad Asif Rafiq

### **Assistant Professors**

Dr. Ehsan ul Haq

Dr. Adnan Maqbool

### **Lecturers**

Ms. Khushnuda Nur

Mr. Moaz Waqar

Mr. Syed Farrukh Alam Zaidi

Mr. Usman Sikander

## DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

### METALLURGICAL & MATERIALS ENGINEERING



### MISSION

The Department is to produce Metallurgical and Materials Engineers with sound professional knowledge, ethical values, keen sense of social responsibilities and a passion for lifelong learning. The graduates will be trained for their active role in academia, industry and R&D sector at national and international level keeping in view the latest trends in the field.

### INTRODUCTION

Department of Metallurgical and Materials Engineering has successfully provided the students with the higher quality of education and training in Metallurgical and Materials Engineering. A well-trained and dedicated faculty together with well-equipped laboratories makes this department one of the most accomplished Departments. The total enrollment of students in the department is 250.

### COURSES OF STUDY

The educational objective of Bachelor's degree program is to produce graduates with sound understanding of science and engineering concepts regarding both metals and modern materials. Keeping this in mind, the curriculum designed for the Metallurgy courses being offered in this program includes a range of subjects varying from covering the relevant concepts of extractive metallurgy, industrial metallurgy and physical metallurgy to the science and design of different metals used in engineering applications. In Materials Engineering courses being offered, main focus is on material synthesis, processing and characterization techniques. Students are taught fundamentals of renewal, selection, processing and design of modern materials including polymers, ceramics, bio-materials, nano-materials and composites.

In order to produce the graduates maintaining a professional standard, exposure to an integrated knowledge based on mathematics, chemistry, physics and management is also emphasized. Instructional tours to metallurgical industries, material development industries, research organizations and educational seminars are also frequently arranged to help the students to relate their theoretical learning with industrial and international practices.



## DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

The students are also engaged in internship programs with different metallurgical and materials related organizations every year for practical training. This helps polish their academic concepts and prepare them to handle the practical problems of the industry.

A Master's degree program is also being run in this department. The curriculum includes courses on:

1. Extraction Processes
2. Characterization Techniques
3. Corrosion and its Prevention
4. Industrial Management
5. Phase Transformation
6. Metal Working Processes
7. Powder Metallurgy
8. Heat Treatment
9. Solidification Processes
10. Materials Science

It is designed primarily for graduate metallurgical and materials engineers working in industry or research organizations to further improve their skills and knowledge in the field. Special emphasis is laid in enhancing students ability to meet actual challenges faced in the industrial organizations.

The department also offers a Ph.D. program. At present, a number of researchers are engaged in their Ph.D.

### LABORATORIES AND OTHER FACILITIES

The departmental academic activity is

based on the following main disciplines:

- Physical Metallurgy
- Ferrous and Non Ferrous Extraction
- Mechanical Metallurgy
- Polymeric Materials
- Ceramic Materials
- Composite Materials
- Bio and Nano-Materials
- Electric and Magnetic Materials
- Corrosion and Corrosion Prevention



- Foundry Engineering
  - Heat Treatment
- Department is equipped with the following laboratories:
- Ceramic and composites
  - Polymeric Materials
  - Inspections and Testing of Materials
  - Welding and Joining of Materials
  - Corrosion and Protection
  - Metallography
  - Foundry Engineering
  - Computer
  - Heat Treatment
  - Mechanical Workshop

A seminar hall is provided for not only official seminars and presentations but also for students to present their research work and course related Presentations. The experience helps them in presenting their work at larger platforms. The department has a library with over thirteen hundred textbooks, handbooks and reference books for the use of faculty members and students. The library is provided with internet facility and computer laboratory has also Internet access.

The faculty members are actively engaged in research and regularly present their papers in national and international conferences. Seminars and symposia on metallurgical issues are held regularly. The faculty members maintain interaction with the industries which avail their advisory services in inspection and testing, alloy development, melting and casting, heat treatment, metallographic studies and extraction of ferrous, non-ferrous metals and corrosion prevention. The Department is engaged in providing advice, testing services and consultancy to the various major industries of the country including: Sui. Northern Gas Pipelines, Millat Tractors and other auto-industry, steel making units in Lahore, pipe manufacturing industry, vendors of defense industry, swings and rides industry and vendors of auto-industry.

## B.Sc. METALLURGICAL & MATERIALS ENGINEERING CURRICULUM

### METALLURGICAL & MATERIALS ENGINEERING

Code	Title (Pre-requisites)	Credit Hours		Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab			Theory	Lab
<b>1. Knowledge Area — Humanities (10 Credit Hours)</b>				<b>6. Knowledge Area — Major Based Core (Breadth &amp; Depth) (59 Credit Hours)</b>			
IS 101	Islamic and Pakistan Studies-I	3	0	MME 210	Foundry Engineering	3	1
IS 201	Islamic and Pakistan Studies-II	3	0	MME 203	Powder Metallurgy	3	0
HU 111	Communication Skills	0	1	MME 204	Polymeric Materials	3	1
HU 221	Technical Writing & Presentation Skills	3	0	MME 205	Iron and Steel Making Processes	3	0
<b>2. Knowledge Area — Management (10 Credit Hours)</b>				MME 312	Ceramic Materials	3	1
MME 103	Industrial Safety and Environmental Engineering	3	0	MME 301	Electrical and Magnetic Materials	3	0
MME 303	Inspection and Quality Assurance	3	1	MME 302	Non-Ferrous Extractive Metallurgy	3	0
MME 306	Industrial and Financial Management	3	0	MME 321	Heat Treatment and Phase Transformation	3	1
<b>3. Knowledge Area — Natural Sciences (18 Credit Hours)</b>				MME 305	Welding and Joining of Materials	3	1
MA-111	Applied Mathematics-I	3	0	MME 308	Characterization of Engineering Materials	3	0
MA-112	Applied Mathematics-II	3	0	MME 420	Solidification of Metals and Alloys	3	1
MA 242	Engineering Statistics	3	0	MME 421	Metal Working Processes	3	0
PHY 114	Applied Physics	2	1	MME 422	Advance Ceramics	3	0
CY 151	Material Chemistry-I	2	1	MME 402	Nano Materials	2	0
MME 202	Applied thermodynamics	3	0	MME 403	Composite Materials	3	1
<b>4. Knowledge Area — Computing (5 Credit Hours)</b>				MME 404	Corrosion and Corrosion Control	3	1
MA 240	Numerical Analysis	2	1	MME 405	Surface Science and Engineering	2	0
MME 307L	Computational Methods in Materials Engineering	0	2	MME 406	Bio Materials	2	0
<b>5. Knowledge Area — Engineering Foundation (22 Credit Hours)</b>				<b>7. Knowledge Area — Senior Design Project (6 Credit Hours)</b>			
EE 201	Basic Electrical and Electronics Engineering	3	1	MME-411	Final Year Project-I	0	3
ME 122L	Engineering Drawing	0	2	MME-412	Final Year Project-II	0	3
MME 101	Introduction to Metallurgy and Materials	3	1				
ME 100L	Workshop Practice	0	1				
MME 102	Mechanics of Materials	2	0				
MME 211	Physical Metallurgy	3	1				
MME 311	Mechanical Behavior of Engineering Materials	3	0				
MME 304	Process Control and Instrumentation	2	0				



## B.Sc. METALLURGICAL & MATERIALS ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1							
Code	Title	Credit Hours		Code	Title	Credit Hours	
		Theory	Lab			Theory	Lab
Semester 1				Semester 2			
EE 199	Basic Electrical and Electronics Engineering	3	1	PHY 114	Applied Physics	2	1
ME 122L	Engineering Drawing	0	2	CY 151	Material Chemistry-I	2	1
MME 101	Introduction to Metallurgy and Materials	3	1	ME 100L	Workshop Practice	0	1
IS 101	Islamic and Pakistan Studies-I	3	0	HU 111	Communication Skills	0	1
MA 111	Applied Mathematics-I	3	0	MME 102	Mechanics of Materials	2	0
				MA 112	Applied Mathematics-II	3	0
				MME 103	Industrial Safety and Environmental Engg	3	0
	Sub-Total	16			Sub-Total	16	
Year 2							
Semester 3				Semester 4			
MME 201	Fuels and Furnaces	2	0	MME 211	Physical Metallurgy	3	1
MME 210	Foundry Engineering	3	1	MME 203	Powder Metallurgy	3	0
IS 201	Islamic and Pakistan Studies-II	3	0	MME 204	Polymeric Materials	3	1
MA 240	Numerical Analysis	2	1	MME 205	Iron and Steel Making Processes	3	0
HU 221	Technical Writing & Presentation Skills	3	0	MA 242	Engineering Statistics	3	0
MME 202	Applied thermodynamics	3	0				
	Sub-Total	18			Sub-Total	17	
Year 3							
Semester 5				Semester 6			
MME 311	Mechanical Behavior of Engineering Materials	3	0	MME 304	Process Control and Instrumentation	2	0
MME 312	Ceramic Materials	3	1	MME 321	Heat Treatment and Phase Transformation	3	1
MME 301	Electrical and Magnetic Materials	3	0	MME 305	Welding and Joining of Materials	3	1
MME 302	Non-Ferrous Extractive Metallurgy	3	0	MME 306	Industrial and Financial management	3	0
MME 303	Inspection and Quality Assurance	3	1	MME 307L	Computational Methods in Materials Engg	0	2
				MME 308	Characterization of Engineering Materials	3	0
	Sub-Total	17			Sub-Total	18	
Year 4							
Semester 7				Semester 8			
MME 420	Solidification of Metals and Alloys	3	1	MME 403	Composite Materials	3	1
MME 421	Metal Working Processes	3	0	MME 404	Corrosion and Corrosion Control	3	1
MME 422	Advance Ceramics	3	0	MME 405	Surface Science and Engineering	2	0
MME 401	Nuclear Materials	2	0	MME 406	Bio Materials	2	0
MME 402	Nano Materials	2	0	MME 407	Vacuum Technology	2	0
MME 411	Final Project-I	0	3	MME 412	Final Project-II	0	3
	Sub-Total	17			Sub-Total	17	



# FACULTY OF EARTH SCIENCES & ENGINEERING

Department of Mining Engineering  
Department of Geological Engineering  
Department of Petroleum & Gas Engineering





# DEPARTMENT OF MINING ENGINEERING

## **Chairman**

Dr. Zulfiqar Ali

## **Assistant Professors**

Mr. Muhammad Mansoor Iqbal

Dr. Shahab Saqib

Dr. Muhammad Azeem Raza

Dr. Muhammad Zaka Emad

Dr. Yasir Majeed

Mr. Muhammad Shahzad

Dr. Hafiz Syed Mahmood Arshad

## **Lecturers**

Mr. Sohail Manzoor

Mr. Mirza Muhammad Zaid

Mr. Rangzeb Goraya

## **INTRODUCTION**

The Department of Mining Engineering was established in 1954 as part of the Maclagan Engineering College, and has the distinction of being the first in the country to offer a formal degree course in Mining Engineering. Mining Engineering program has the tradition, history and repute of producing quality mining engineers who are serving both nationally and internationally.

## **MISSION**

The mission of the Mining Engineering department is to continue to improve and maintain quality graduate programs, that are well supported by a modern and up-to-date curriculum and labs, and qualified faculty, and to produce technically competent and disciplined mining engineers who possess the required leadership and team skills and can compete in the global job market.

MINING ENGINEERING

## DEPARTMENT OF MINING ENGINEERING

### Program Educational Objectives (PEOs)

The mining engineering graduates will be able to:

- PEO-01:** Solve current and emerging problems, through the application of fundamental and core scientific and engineering knowledge, technical and analytical skills, and design practices related to mining engineering profession;
- PEO-02:** Function responsibly and ethically in a variety of professional roles to design and operate mines with an obligation to protect human life, health and welfare, the environment, and stakeholders' interests;
- PEO-03:** Utilize professional skills such as effective communication, teamwork, and leadership;
- PEO-04:** Compete globally for job placement and advanced degrees in mineral related fields.

### COURSES OF STUDY

The Department offers the following degree programs:

- **BSc. Mining Engineering**
- **MSc. Mining Engineering**
- **Ph.D. Mining Engineering**

The curriculum for the Bachelor's degree in Mining Engineering is broad-based in its contents and is designed to produce graduates who can cope with a wide range of tasks which a mining engineer is called upon to perform. It offers basic subjects in science and engineering in the first two years; in the later two years it covers the relevant subjects in mining operations, geology, management and mine environment in detail. The graduate

students are prepared to handle the geotechnical problems related to surface and underground excavations, the extraction & beneficiation of coal and other minerals, and other rock and mine/mineral related problems.

### CAREER CHOICES AND JOB PLACEMENT

A degree in Mining Engineering offers attractive careers both in private and public sectors. The private sector jobs include coal mining, cement industry, hydro-power projects, tunneling and underground construction projects, and coal energy sector. The government sector, where the mining engineers are employed, includes the Mines and Minerals Department, Govt. of Punjab, the Inspectorate of Mines, Pakistan Mineral Development Corporation (PMDC), Punjab Mineral Development Corporation (PUNJMIN), Pakistan Atomic Energy Commission, and





## DEPARTMENT OF MINING ENGINEERING

### FIELD TRAINING AND INTERNSHIPS

Industrial Tours and Field Internships are an integral part of the mining engineering curriculum and are arranged for the students on regular basis. In addition, two to three week Summer Field Surveying camp and a week-long First Aid Training camp are also compulsory requirements for the completion of the degree program.



### LABORATORY & OTHER FACILITIES

The department has the following major laboratories:

- Mineral Processing
- Mine Surveying
- Rock Mechanics
- Mine Environment
- Structural Geology
- Mine Safety and Rescue
- Explosives Engineering
- Excavation Engineering
- Mine Design and Simulation

Other facilities include a good departmental library, a computer center, atomic absorption spectrophotometer, and XRF analyzer. Some of the key equipment in our department includes a 200-Ton Universal Testing Machine, Rock abrasively and Brittleness test set-ups and a total survey station.



## B.Sc. MINING ENGINEERING PROGRAM CURRICULUM

### MINING ENGINEERING

Code	Title	Credit Hours	
		Theory	Lab
1. Knowledge Area- Humanities (10 Credit Hours)			
HU-111	Communication Skills	0	1
HU-221	Technical Writing & Presentation Skills	3	0
IS-101	Islamic & Pakistan Studies - I	3	0
IS-201	Islamic & Pakistan Studies - II	3	0
2. Knowledge Area – Management (6 Credit Hours)			
IME-355	Engineering Economics	3	0
MGT-408	Project Management	3	0
3. Knowledge Area – Natural Sciences (23 Credit Hours)			
MA-113	Calculus and Analytic Geometry	3	0
MA-228	Differential Equations	3	0
MA-234	Linear Algebra	3	0
Phy-116	Applied Physics	2	1
Cy-143	Physical and Industrial Chemistry	3	1
Min-E-110	Applied Geology	3	1
Min-E-120	Stratigraphy and Structural Geology	2	1
4. Knowledge Area – Computing (09 Credit Hours)			
CS-101	Computing Fundamentals	2	1
MA-242	Engineering Statistics	3	0
MA-240	Numerical Analysis	2	1
5. Knowledge Area - Engineering Foundation (24 Credit Hours)			
CE-231	Fluid Mechanics-I	3	1
EE-199	Basic Electrical and Electronics Engineering	3	1
MA-235	Engineering Mechanics	2	1
ME-122L	Engineering Drawing	0	2
ME-210	Applied Thermodynamics	3	1
ME-220	Mechanics of Materials	3	1
Min-E-121	Mining Engineering Fundamentals	3	0

Code	Title	Credit Hours	
		Theory	Lab
6. Knowledge Area - Major Based Core (Breadth and Depth) (54 Credit Hours)			
Min-E-240	Surveying	3	2
Min-E-350	Rock Mechanics	3	1
Min-E-351	Mineral Exploration	3	1
Min-E-352	Mine Power, Drainage and Material Handling	3	1
Min-E-353	Mine Ventilation	3	1
Min-E-360	Ground Control Engineering	3	0
Min-E-361	Underground Mine Design	3	0
Min-E-362	Surface Mine Design	3	0
Min-E-363	Explosives Engineering	3	1
Min-E-470	Tunneling and Excavation Engineering	1	0
Min-E-471	Environmental Aspects of Mining	3	1
Min-E-472	Mineral Processing	3	1
Min-E-480	Mine Hazards and Safety	3	1
Min-E-481	Coal Technology	3	1
Min-E-482	Solution Mining	2	0
Min-E-483	Mining Law	1	0
7. Interdisciplinary Engg., Breadth (4 Credit Hours)			
Geo-E-353	Introduction to GIS and Remote Sensing	2	1
Min-E-350	ME-100L	0	1
8. Senior Design Project (6 Credit Hours)			
Min-E-475	Senior Design Project-I	0	3
Min-E-485	Senior Design Project-II	0	3



## B.Sc. MINING ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1								
Semester 1					Semester 2			
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
PHY-123	Applied Physics	2	1		EE-199	Applied Electricity	3	1
CS-141	Introduction to Computing	3	1	HU-111L	Communication Skills	0	1	
MA-123	Calculus	3	0	CH-100	Applied Chemistry	2	1	
BME-141	Basic Biology	3	1	MA-228	Differential Equations	3	0	
Audit Course	International Language	0	0	BME-131	Human Physiology & Anatomy	3	1	
ME-124L	Engineering Drawing	0	1					
Subtotal		15			Subtotal		15	
Year 2								
Semester 3					Semester 4			
MCT-331	Modeling & Simulation	3	1		BME-243	Cell & Molecular Biology	3	1
BME-251	Biomaterials & Design	3	1		MA-346	Numerical Methods	3	0
HU-221	Technical Writing and Presentation	3	0		EE-220	Signals & Systems	3	0
BME-242	Biochemistry	3	0		BME-211	Biophysics	3	1
ME-100L	Workshop Practice	0	1		EE-272	Digital Systems	3	1
MA-234	Linear Algebra	3	0				-	-
Subtotal		18			Subtotal		18	
Year 3								
Semester 5					Semester 6			
IS-101	Islamic/Ethics & Pak Studies 1	3	0		BME-321	Biomedical Signal Processing	3	1
BME-312	Biomechanics	3	1		BME-333	Clinical Lab Instrumentation	3	1
EE-302	Applied Probability	3	0		IS-201	Islamic/Ethics & Pak Studies 2	3	0
EE-273	Microprocessor Systems	3	1		EE-380	Electromagnetic Theory	3	0
BME-332	Biomedical Instrumentation	3	1		BME-352	Tissue Engineering	3	1
Subtotal		18			Subtotal		18	
Year 4								
Semester 7					Semester 8			
MGT-4XX	Management Elective	3	0		BME-4YY	Technical Elective 2	2	1
BME-4XX	Technical Elective 1	2	1		BME-4YY	Technical Elective 3	2	1
EE-340	Control Systems	3	1		BME-422	Biomedical Imaging	3	1
BME-499a	Biomedical Engineering Project (P1)	0	3		BME-499b	Biomedical Engineering Project (P2)	0	3
IME-251	Social & Ethical Aspects in Engineering	2	0		HU-4XX	Clinical Psychology	2	0
Subtotal		15			Subtotal		15	

**NOTE: First Aid Training and Field Survey Camp are mandatory**



# DEPARTMENT OF GEOLOGICAL ENGINEERING

## GEOLOGICAL ENGINEERING

### Dean

Prof. Dr. Nadeem Feroze

### Chairman

Dr. Muhammad Zubair Abu Bakar

### Professor

Dr. Muhammad Saleem Khan

### Assistant Professors

Ms. Sadia Ismail

Dr. Muhammad Farooq Ahmed

Dr. Muhammad Arshad

Dr. Hafiz Muhammad Awais Rashid

### Lecturers

Mr. Ahsan Mehmood

Ms. Maryum Zameer Khan

Ms. Saira

### INTRODUCTION

In the 21st century the most vital challenge faced by the mankind is the preservation and efficient utilization of Geo-space and its resources without disturbing the

ecological balance. The aim of Geological Engineering is to come up with engineering solutions which can meet these challenges.

## DEPARTMENT OF GEOLOGICAL ENGINEERING

The Geological Engineering Program is designed to produce professional Geological Engineers who can ensure proficient practice of Geological Engineering profession in the following areas:

- **Rock Engineering and Geo-technical Engineering**
- **Exploration of Natural Energy Resources**
- **Environmental and Water Resources Aspects**

A bachelors degree in Geological Engineering is the basis of careers concentrating on the interaction of humans and the earth. The degree program in geological engineering is accredited by the Pakistan Engineering Council and Higher Education Commission of Pakistan. It is worth mentioning that previous batches of this discipline are already contributing with their knowledge and skills in both private and public sectors.

### MISSION

The Department of Geological Engineering at UET Lahore is fully devoted to develop all corridors of knowledge in the areas of geological, geotechnical and energy resources exploration. The department aims at providing adequate scientific knowledge and engineering skills to its undergraduate and graduate students, enabling them to become leaders in geological engineering practice and research fields.

### Program Educational Objectives (PEOs)

**PEO-01:** To develop fundamental concepts and principles related to the Mathematics and Science, and impart state of the art knowledge to the students in the discipline of Geological Engineering with a strong background in Geology.

**PEO-02:** To develop ability and skills to utilize the technology and modern Engineering tools to identify and solve complex Engineering problems.

**PEO-03:** To produce competent Geological Engineers who are capable to apply the basic knowledge of geology to design and supervise infrastructure projects related to geological engineering field.

**PEO-04:** To inculcate the spirit of discipline, self-motivation, self-confidence and the code of ethics of Engineering profession for producing competent Geological Engineers with management skills.



### COURSES OF STUDY

The department offers courses of study leading to the following degrees:

- **B.Sc. Geological Engineering**
- **M.Sc. Geological Engineering**
- **M.Sc. Geological Sciences**

The curriculum of Geological Engineering program has been designed keeping in view the local needs and international trends. In the first two years the essential concepts of basic sciences and engineering are taught to the students to give them required breadth. The last two years of the program are designed to give the students the necessary skills in the three main focused areas as mentioned in the objectives. The groups of subjects taught in each area are given below:

- Rock Engineering and Geo-technical Engineering - Engineering Geology, Rock Mechanics, Geo-technical Engineering, Tunnel Engineering and Shaft Sinking, Pavement and Foundation Engineering, Earthquake Seismology and Risk Assessment.
- Exploration of Natural Energy Resources – Petroleum Geology, Drilling Engineering, Petrophysics and Well Logging, Introduction to Geophysical Exploration Techniques, Introduction to GIS / RS.
- Environmental and Water Resources Aspects - Hydrogeology, Environmental Geology & Hazardous Waste Management.



## DEPARTMENT OF GEOLOGICAL ENGINEERING

### FIELD GEOLOGY CAMPS

Geological Engineering is a very adventurous program which includes visits to number of areas for the study of Geology. Department of Geological Engineering arranges number of field visits to different areas where students are exposed to different geological features and beautiful landscapes. In such an environment, students learn professional skills enthusiastically and enjoy the field trips. These tours include survey camp and geology camp, which are considered mandatory for the completion of the degree. The most famous locations for the instructional tours are Abbottabad, Mansehra, Muzaffarabad, Khewra Gorge, Namal Gorge, Salt Range, Dam sites (Tarbela, Mangla, Khanpur etc.), different oil/gas drilling rig sites and visits to different construction sites. These tours give the exposure of the field conditions to the students and also train and prepare them to work in the field.

**Liaison/Internship with Industry**  
The department has established continuing links with Geotechnical and Petroleum industries. As a result, many national and multinational organizations are providing

internships for practical training. Leading companies including NESPAK, WAPDA, MMP, Berkeley Associates, NDC, ACE, OGDCL, NURICON, Punjab Mineral Company etc. also offer internships and job opportunities to our graduates.



- Drilling Engineering
- Computer
- Rock Cutting and Sample Preparation

### KEY RESEARCH AREAS

- Engineering Geology
- Tunnel Design and Mechanical Excavation

### LABORATORIES

- Engineering Geology
- Rock Mechanics/ Mechanical Rock Fragmentation
- Soil Mechanics
- Hydro geology
- Environmental Geology
- Geophysics
- Mineralogy and Petrology
- Non-Explosive Rock Fragmentation
- Geotechnical Instrumenations
- Geotechnical and Geo-Mechanics
- Geoenvironmental Engineering
- Hydrogeology and Environment
- Petroleum Geology
- Drilling Optimization Techniques
- Petrophysics and Exploration Seismology



## B.Sc. GEOLOGICAL ENGINEERING CURRICULUM

Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
1.Knowledge Area – Humanities (10 Credit Hrs)			
HU-111	Communication Skills	0	1
HU-221	Technical Writing and Presentation Skills	3	0
IS-101	Islamic and Pakistan Studies I	3	0
IS-201	Islamic and Pakistan Studies II	3	0
2.Knowledge Area - Management (6 Credit Hrs.)			
IME-374	Engineering Economics	3	0
MGT-408	Project Management	3	0
3.Knowledge Area – Natural Sciences (16 Credit Hrs.)			
MA-113	Calculus and Analytic Geometry	3	0
MA-116	Linear Algebra and Differential Equations	3	0
MA-235	Engineering Mechanics	2	1
CY-143	Physical & Industrial Chemistry	3	1
Phy-117	Applied Physics	2	1
4.Knowledge Area-Computing (9 Credit Hrs.)			
CS-101	Computing Fundamentals	2	1
MA-240	Numerical Analysis	2	1
MA-242	Engineering Statistics	3	0
5.Knowledge Area-Engineering Foundation (30 Credit Hrs.)			
EE-199	Basic Electrical and Electronics Engineering	3	1
ME-122L	Engineering Drawing	0	2
ME-210	Applied Thermodynamics	3	1
ME-220	Mechanics of Materials	3	1
CE-231	Fluid Mechanics I	3	1
Geo-E-110	Physical Geology	3	1
Geo-E-120	Structural Geology and Stratigraphy Geo-E-110	2	1
Min-E-240	Surveying	3	2

Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
6.Knowledge Area–Major Based Core (Breadth) (21 Credit Hrs.)			
Geo-E-230	Mineralogy and Petrology Geo-E-110	2	1
Min-E-350	Rock Mechanics	3	1
Geo-E-351	Geotechnical Engineering I	3	1
Geo-E-352	Petroleum Geology Geo-E-120	2	1
Geo-E-353	Introduction to GIS / RS	2	1
Geo-E-361	Introduction to Geophysical Exploration Techniques Phy-117	3	1
7.Knowledge Area–Major Based Core (Depth) (33 Credit Hrs.)			
Geo-E-350	Engineering Geology Geo-E-110	3	1
Geo-E-360	Drilling Engineering Geo-E-352	2	1
Geo-E-362	Earthquake Seismology and Risk Assessment	2	1
Min-E-470	Tunneling and Excavation Engineering	3	1
Geo-E-470	Petrophysics and Well Logging Geo-E-360	3	1
Geo-E-471	Hydrogeology Geo-E-350	3	1
Geo-E-472	Geotechnical Engineering II Geo-E-351	3	1
Geo-E-480	Environmental Geology and Hazardous Waste Management Geo-E-110	3	1
Geo-E-481	Pavement and Foundation Engineering Geo-E-472	2	1
8.Inter-Disciplinary Engineering Breadth (5 Credit Hrs.)			
Min-E-363	Explosives Engineering	3	1
ME-100L	Workshop Practice	0	1
9.Senior Design Project (6 Credit Hrs.)			
Geo-E-475	Senior Design Project I	0	3
Geo-E-485	Senior Design Project II Geo-E-475	0	3

**Note:** Field Geology camp and surveying camp are mandatory

## B.SC GEOLOGICAL ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1							
Semester 1				Semester 2			
Code	Title	Credit Hours		Code	Title	Credit Hours	
		Theory	Lab			Theory	Lab
EE-199	Basic Electrical and Electronics Engineering	3	1	PHY-117	Applied Physics	2	1
MA-113	Calculus and Analytic Geometry	3	0	MA-116	Linear Algebra And Differential Equations	3	0
CY-143	Physical and Industrial Chemistry	3	1	Geo-E-120	Structural Geology and Stratigraphy	2	1
ME-122L	Engineering Drawing	0	2	CS-101	Computing Fundamentals	2	1
Geo-E-110	Physical Geology	3	1	HU-111	Communication Skills	0	1
				IS -101	Islamic/Ethics & Pakistan Studies-I	3	0
				ME-100L	Workshop Practice	0	1
	Sub-Total	17			Sub-Total	17	
Year 2							
Semester 3				Semester 4			
MA-235	Engineering Mechanics	2	1	MA-240	Numerical Analysis	2	1
MA-242	Engineering Statistics	3	0	MIN-E-240	Surveying	3	2
ME-210	Applied Thermodynamics	3	1	ME-220	Mechanics of Materials	3	1
CE-231	Fluid Mechanics-I	3	1	HU-221	Technical Writing and Presentation Skills	3	0
GEO-E-230	Mineralogy and Petrology	2	1	IS -201	Islamic/ Ethics & Pakistan Studies- II	3	0
	Sub-Total	17			Sub-Total	18	
Year 3							
Semester 5				Semester 6			
GEO-E-350	Engineering Geology	3	1	GEO-E-360	Drilling Engineering	2	1
GEO-E-351	Geotechnical Engineering I	3	1	GEO-E-361	Introduction to Geophysical Exploration Techniques	3	1
GEO-E-352	Petroleum Geology	2	1	GEO-E-362	Earthquake Seismology & Risk Assessment	2	1
GEO-E-353	Introduction to GIS/RS	2	1	IME-374	Engineering Economics	3	0
MIN-E-350	Rock Mechanics	3	1	MIN-E-363	Explosives Engineering	3	1
	Sub-Total	18			Sub-Total	17	
Year 4							
Semester 7				Semester 8			
GEO-E-470	Petrophysics & Well Logging	3	1	MGT-408	Project Management	3	0
GEO-E-471	Hydrogeology	3	1	GEO-E-480	Environmental Geology & Hazardous Waste Management	3	1
GEO-E-472	Geotechnical Engineering II	3	1	GEO-E-481	Pavement & Foundation Engineering	2	1
MIN -E-470	Tunneling and Excavation Engineering	3	1	GEO-E-485	Senior Design Project II	0	3
GEO-E-475	Senior Design Project I	0	3				
	Sub-Total	19			Sub-Total	13	

## DEPARTMENT OF PETROLEUM & GAS ENGINEERING

### Dean

Prof. Dr. Nadeem Feroze

### Chairman

Dr. Muhammad Khurram Zahoor

### Assistant Professors

Dr. Amanat Ali Bhatti

Mr. Azam Khan

Mr. Rizwan Muneer

Mr. Muhammad Haris

Mr. Faisal Mehmood

### Lecturers

Mr. Muhammad Rizwan Latif

Mr. Muhammad Kashif Ali

Mr. Waseem Ijaz

Mr. Hasan Jehanzaib

### INTRODUCTION

The Department of Petroleum and Gas Engineering has the distinction of being the pioneer in the country to offer degree programs in Petroleum & Gas Engineering. It was first instituted in 1969 as a division of Mining Engineering Department. Realizing

the importance of the discipline and the department by the national petroleum sector, a full-fledged department of Petroleum and Gas Engineering was established in 1975.

The department has been the major contributor towards endowing and establishing the profession of Petroleum Engineering in Pakistan and has always maintained a leading role in petroleum engineering education. It is now more than a decade that the department started the postgraduate study program and has since strengthened its research capabilities over the years. The department offers degree program at Under-graduate and Post-graduate level in Petroleum & Gas Engineering.

### MISSION

To transform young brains into brilliant Petroleum Engineers, through modern teaching and research, to achieve professional excellence in oil and gas industry.



## DEPARTMENT OF PETROLEUM & GAS ENGINEERING

### Program Educational Objectives (PEOs)

The Petroleum & Gas Engineering program education objectives are as follows:

**PEO-01:** To enable the graduates to solve complex engineering problems, through the acquired engineering knowledge, design practices and skills pertinent to petroleum engineering.

**PEO-02:** To develop effective communication, teamwork and management skills among graduates.

**PEO-03:** To inculcate comprehension of the fundamentals of economic, environmental sustainability and society development.

**PEO-04:** To develop professionalism, ethical values and determination among graduates to continue lifelong learning.

The curriculum is well-diversified that includes the courses in Production Engineering, Artificial Lift Methods, Reservoir Engineering, Petroleum Fluid Properties, Enhanced Oil Recovery techniques, Well Testing, Well Logging, Natural Gas Transmission & Distribution, Rock Properties, Petroleum Economics, storage problems and many other related subjects. In addition to these, strong support of basic sciences

courses at different levels is also a part of the curriculum.

Actual field data and related problems are included in the courses to develop field-oriented approach in the students. The spread of the course contents is broad enough to groom the graduates for any major area of the petroleum engineering profession. Students are provided opportunities to visit oil and gas fields to familiarize them with the tasks and operations they have to undertake in their professional career.

### LABORATORIES & OTHER FACILITIES

The department has the following laboratories which meet the academic and research needs of the students and teachers, respectively:

- Petroleum Reservoir Fluids Laboratory
- Petrophysics Laboratory
- Drilling Engineering Laboratory
- Computer/Reservoir Simulation Laboratory
- Gas Engineering Laboratory

The department has the facility of a well-stocked library as well. The library is stuffed with over 2500 volumes of books. The Japanese aid through JICA Program of Rs. 20 million for laboratory equipment resulted in upgraded laboratories. Apart from merit scholarships, the department is offered numerous scholarships from the local industry, District Government and Zakat Fund. Majority of students get support from these scholarships.

The research areas of the faculty include reservoir engineering, production engineering, drilling engineering, enhanced oil recovery, well testing and reservoir simulation. The department is working on a consolidated program to offer professional courses and consultancy services to the industry. The students also carry out comprehensive research projects related to the practical industrial problems as part of their final year project.



## DEPARTMENT OF PETROLEUM & GAS ENGINEERING

The graduates of this department are offered well-paid positions in operator as well as service companies of petroleum sector including national and multi-national companies. Doors of jobs are open for the graduates of this department worldwide as well. A large number of graduates from this department are serving worldwide including Middle East, Europe, North America, Africa, etc.

**Liaison with the Industry**  
Key to modern day success in any profession rests with the integrated working environment between different components of that profession. In this regard, it is very important that institution must have a live coordination with relevant industry, so is true for the Department of Petroleum and Gas Engineering. Despite, the fact that petroleum industry of Pakistan is clustered in Karachi and

Islamabad, the Department of Petroleum & Gas Engineering has successfully managed to establish such coordination.

Summer internships are also available to the students of this department. Internship program is supported by national as well as multi-national companies working in Pakistan.



## B.Sc. PETROLEUM & GAS ENGINEERING CURRICULUM

Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
1. Knowledge Area – Humanities (10 Credit Hrs)			
HU-111	Communication Skills	0	1
HU-221	Technical Writing and Presentation Skills	3	0
IS-101	Islamic and Pakistan Studies I	3	0
IS-201	Islamic and Pakistan Studies II	3	0
2. Knowledge Area - Management (4 Credit Hrs.)			
ChE-451	Environment & Safety	3	1
3. Knowledge Area – Natural Sciences (29 Credit Hrs.)			
Phy-115	Applied Physics	2	1
CY-171	Petroleum Chemistry	2	1
MA-113	Calculus and Analytic Geometry	3	0
MA-129	Vector and Complex Analysis	3	0
MA-224	Multivariate Calculus	3	0
MA-225	Differential Equations and Transforms	3	0
MA-343	Applied Probability and Statistics	3	0
MA-345	Numerical Methods in Computing	3	0
Min-E-110	Applied Geology	3	1
4. Knowledge Area-Computing (3 Credit Hrs.)			
CS-101	Computing Fundamentals	2	1
5. Knowledge Area-Engineering Foundation (22 Credit Hrs.)			
Pet.E-101	Fundamentals of Petroleum Engineering	3	0
EE-199	Applied Electricity	3	1
ME-120	Engineering Drawing & Graphics	1	1
ME-100L	Workshop Practice	0	1
C.E-210	Strength of Materials	3	1
C.E-240	Fluid Mechanics	3	1
ChE-251	Applied Thermodynamics	3	1

Code	Title (Pre-requisites)	Credit Hours	
		Theory	Lab
6. Knowledge Area—Major Based Core (Breadth & Depth) (58 Credit Hrs.)			
Pet.E-202	Petroleum Geology & Geophysical Exploration	3	0
Pet.E-203	Petrophysics	2	1
Pet.E-211	Drilling Engineering - I	2	1
Pet.E-212	Properties of Reservoir Fluids	2	1
Pet.E-313	Well Logging	2	1
Pet.E-314	Reservoir Engineering	3	0
Pet.E-315	Petroleum Production Engineering-I	3	0
Pet.E-316	Field Operations in Petroleum Engineering	3	0
Pet.E-317	Petroleum Economics & Risk Analysis	3	0
Pet.E-322	Natural Gas Processing & Pipeline Management	3	1
Pet.E-323	Drilling Engineering - II	3	1
Pet.E-424	Well Testing	2	1
Pet.E-425	Petroleum Production Engineering-II	3	1
Pet.E-426	Principles of Reservoir Simulation	3	1
Pet.E-427	Reservoir Management	3	1
Pet.E-428	Gas Reservoir Engineering	3	1
Pet.E-429	Principles of Enhanced Oil Recovery	3	1
7. Inter-Disciplinary Engineering Breadth (5 Credit Hrs.)			
Ch.E-351	Chemical Technology of Petroleum	3	1
8. Senior Design Project (6 Credit Hrs.)			
Pet.E-491	Project (Phase-I)	0	3
Pet.E-492	Project (Phase-II)	0	3



## B.SC PETROLEUM & GAS ENGINEERING – RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
Pet.E-101	Fundamentals of Petroleum Engineering	3	0		MA-129	Vector and Complex Analysis	3	0
EE-199	Applied Electricity	3	1		Phy-115	Applied Physics	2	1
MA-113	Calculus and Analytic Geometry	3	0		CS-101	Computing Fundamentals	2	1
Min-E-110	Applied Geology	3	1		ME-100L	Workshop Practice	0	1
HU-101	Communication Skills	0	1		IS-101	Islamic & Pakistan Studies-I	3	0
ME-120	Engineering Drawing & Graphics	1	1		CY-171	Petroleum Chemistry	2	1
	Sub-Total	17				Sub-Total	16	
Year 2								
Semester 3					Semester 4			
Pet.E-202	Petroleum Geology & Geophysical Exploration	3	0		Pet.E-212	Properties of Reservoir Fluids	2	1
Pet.E-203	Petrophysics	2	1		ChE-251	Applied Thermodynamics	3	1
Pet.E-211	Drilling Engineering-I	2	1		HU-221	Technical Writing & Presentation Skills	3	0
MA-224	Multivariate Calculus	3	0		C.E-240	Fluid Mechanics	3	1
C.E-210	Strength of Materials	3	1		MA-225	Differential Equations and Transforms	3	0
IS-201	Islamic & Pakistan Studies-II	3	0					
	Sub-Total	19				Sub-Total	17	
Year 3								
Semester 5					Semester 6			
Pet.E-313	Well Logging	2	1		Pet.E-315	Petroleum Production Engineering-I	3	0
Pet.E-314	Reservoir Engineering	3	0		Pet.E-316	Field Operations in Petroleum Engineering	3	0
Pet.E-322	Natural Gas Processing & Pipeline Management	3	1		Pet.E-317	Petroleum Economics & Risk Analysis	3	0
MA-343	Applied Probability and Statistics	3	0		Pet.E-323	Drilling Engineering-II	3	1
MA-345	Numerical Methods in Computing	3	1		ChE-351	Chemical Technology of Petroleum	3	1
	Sub-Total	17				Sub-Total	17	
Year 4								
Semester 7					Semester 8			
Pet.E-424	Well Testing	2	1		Pet.E-427	Reservoir Management	3	1
Pet.E-425	Petroleum Production Engineering-II	3	1		Pet.E-428	Gas Reservoir Engineering	3	1
Pet.E-426	Principles of Reservoir Simulation	3	1		Pet.E-429	Principles of Enhanced Oil Recovery	3	1
ChE-451	Environment & Safety	3	1		Pet.E-492	Project (Phase-II)	0	3
Pet.E-491	Project (Phase-I)	0	3					
	Sub-Total	18				Sub-Total	15	

# FACULTY OF ARCHITECTURE & PLANNING

Department of Architecture  
Department of Product & Industrial Design  
Department of City & Regional Planning



First life, then spaces,  
then buildings  
- the other way around  
never works.  
*(Jan Gehl)*



Architecture should  
speak of its time and  
place, but yearn for  
timelessness  
*(Frank Gehry)*





# DEPARTMENT OF ARCHITECTURE

## Dean

Prof. Dr. Ghulam Abbas Anjum

## Chairman

Prof. Dr. Ghulam Abbas Anjum

## Professor

Prof. Dr. Neelum Naz

Department of Architecture UET Lahore is the oldest degree awarding architecture school in Pakistan. It has the distinction of offering the first five-years B. Arch degree program as well as the first postgraduate (PG Diploma, M. Arch and PhD) program in the country. The B. Arch program was initiated in 1962, PG Diploma/M. Arch program in 1990 while first indigenous PhD in Architecture was awarded in 2010.

The Department was founded in 1962 when Maclagan Engineering College (established in 1921 as Mughalpura Technical College) was upgraded as West Pakistan University of Engineering and Technology Lahore. The Department celebrated its half centenary in 2012 and has been a fundamental contributor towards

## Assistant Professors

Dr. Shama Anbrine  
Dr. Afia Zubair Raja  
Ar. Qurat-ul-Ain  
Ar. Jawad Ahmed Tahir  
Ar. Muhammad Saad Khan  
Ar. Sarah Javed Shah

the founding and establishment of the profession of Architecture in Pakistan. With nearly 1500 graduate architects, 150 M. Arch degree holders and 3 PhDs to date, the Department's contribution in the development of the field of architecture and architectural education both locally and globally are noteworthy. Through this large body of alumni, it has the honour and credit of shaping a significant part of the current built environment in urban areas of Pakistan.

Over the decades, the Department has developed unmatched expertise in various facets of the profession of Architecture. At present, in terms of qualification, as well as width and breadth of relevant knowledge base its faculty is far surpassing any other

## Assistant Professors

Ar. Madiha Zaman  
Ar. Fatima Javeed  
Ar. Qudsia Asif

## Lecturer

Ar. Rabia Ammad

school/department of architecture in the country. The Department, thus has maintained its leading role in architectural education in Pakistan.

The programmes offered in the department include:

- (i) **Bachelor of Architecture (B.Arch)**
- (ii) **Master of Architecture (M.Arch)**
- (iii) **PhD in Architecture**

## BACHELOR DEGREE PROGRAM IN ARCHITECTURE (B.ARCH)

B.Arch is a five-year study program leading to a professional degree in Architecture. Graduates of this program fulfil all licensing requirements of (PCATP), and subject to registration with it, are able to practice Architecture anywhere in Pakistan.



## DEPARTMENT OF ARCHITECTURE

The B.Arch program of study is highly demanding and only those students are recommended to apply who are willing to work long hours. Furthermore, a significant component of studies involve fieldwork, where students are required to visit construction sites, conduct field surveys, and join out of station study tours. B. Arch degree requirements also include 12 weeks of internship in a professional establishment, which would typically take place during summer vacations.

### GRADUATE PROGRAMS IN ARCHITECTURE

The graduate program in architecture was instituted in 1990. By now, it has matured and includes M. Arch and Ph.D. programs. The M. Arch is primarily a taught course which culminates in a dissertation by research. The Ph.D. program comprises of coursework and research. These are essentially intended for academics or mature architects who have developed an interest in some particular aspect of the built environment that they tend to explore it deeply.

### OBJECTIVES AND ACADEMIC SYSTEM

The Bachelor of Architecture degree program provides a liberal introduction to study architecture as a discipline and to produce all rounder individuals who can play a leading role in shaping up a healthy society. Students gain a critical and ethical awareness of architecture with much to offer in the face of many of today's most pressing societal challenges. It equips students to join other design fields or related disciplines, and it prepares students for the Master of Architecture degree. The course content includes Basic Design,

Architectural Design, History of Architecture, Materials and Construction, Physical Environmental Studies, Structural Systems, Theory of Architecture, Interior Design, Landscape Architecture etc. Research Methodology etc. The first year begins by introducing the fundamentals before studies of the major subjects in which students are required to design projects of different typologies. The students can have a better sense of life and ability to produce well adjusted whole by blending different aspects: function, form, structure, techniques, context and culture.



## DEPARTMENT OF ARCHITECTURE



The working environment within the Department of Architecture is pleasant and intimate. The students spend a significant part of their working in Design Studios which, coupled with low student intake, ensures high degree of interaction between students, and between faculty members and students. The spacious internal courtyard acts as a social space for different design and drawing activities and enhances interaction between students.

The departmental pedagogy exhibits a strongly belief in the fact that the purpose of university education, above and beyond professional training is broadening the intellectual horizons and to produce enlightened and progressive members of society. Hence the teaching practices at the department aim to achieve these objectives by providing a thorough

knowledge base through formal curriculum, combined with exposure to a social and intellectual environment developed and maintained through informal and co-curricular activities. The students are encouraged to actively participate in different students' societies: Dramatic Society, Literary Society, Debating Society and Environment & Horticulture Society (EHS). The students are also encouraged to participate in the national and provincial activities under the patronization of Pakistan Council of Architects and Planners (PCATP) and Institute of Architects of Pakistan (IAP).

The built environment to a great extent influence and facilitate in

imparting quality education. The Department of Architecture has well furnished design studios, lecture theatres, library and well equipped computer and physical environmental studies labs.

The department has a well stocked library with a large number of books and magazines on Basic Design, Architectural Design, History of Architecture, Building Construction, Physical Environmental Studies, Theory of Architecture, Urban Planning & Design, Research Methodology, Landscape Architecture, Interior Design etc. Other than books and Journals, a separate section exists containing B. Arch and M. Arch Thesis on variety of topics.



## BACHELOR IN ARCHITECTURE CURRICULUM – RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
Arch-101	Basic Design – I	0	5		Arch-111	Basic Design – II	0	5
Arch-102	Materials and Construction – I	2	1		Arch-112	Structural Systems – I	2	1
Arch-103	History of Civilization – I	2	0		Arch-113	History of Civilization – II	2	0
Arch-104	Architectural Graphics-I	0	3		Arch-114	Model Making	0	2
CE-101	Elementary Surveying	3	1		Arch-115	Free Hand Sketching	0	2
HU-111	Communication Skills	0	1		HU/IS-101	Islamic and Pakistan Studies-I	3	0
	Sub-Total	18				Sub-Total	17	
Year 2								
Semester 3					Semester 4			
Arch-201	Architectural Design – I	0	6		Arch-211	Architectural Design – II	0	6
Arch-202	Structural Systems – II	2	1		Arch-212	Materials and Construction-II	2	1
Arch-203	History of Civilization – III	2	0		Arch-213	History of Civilization – IV	2	0
Arch-204	Architectural Graphics-II	0	2		Arch-214	Architectural Graphics-III	0	2
Arch-206	Environmental Control-I	2	1		Arch-216	Environmental Control-II	2	1
Hu/IS-202	Islamic & Pak Studies-II	3	0		Arch-217	Computer Application in Architecture-I	0	2
	Sub-Total	19				Sub-Total	18	
Year 3								
Semester 5					Semester 6			
Arch-301	Architectural Design-III	0	8		Arch-311	Architectural Design-IV	0	8
Arch-302	Building Services	2	1		Arch-312	Architectural Working Drawings	0	2
Arch-303	Environmental Psychology	2	0		Arch-313	Theory of Architecture	2	1
Arch-306	Energy Efficient Architecture	2	1		Arch-317	Interior Design	2	1
Arch-307	Computer Application in Architecture –II	0	2					
	Sub-Total	18				Sub-Total	16	
Year 4								
Semester 7					Semester 8			
Arch-401	Architectural Design-V	0	8		Arch-411	Architectural Design-VI	0	8
Arch-403	History, Theory & Criticism	2	0		Arch-413	Architecture in Pakistan	2	0
Arch-405	Research & Report Writing	2	1		Arch-417	Conservation of Historic Buildings	2	0
Arch-407	Landscape Design	2	1		Arch-418	Urban Design-II	1	2
Arch-408	Urban Design-I	2	1					
	Sub-Total	19				Sub-Total	15	
Year 5								
Semester 9					Semester 10			
Arch-501	Thesis Design-I	0	10		Arch-511	Thesis Design-II	0	11
Arch-502	Project Management	2	1		Arch-512	Professional Practice	2	1
Arch-503	Elective-I	2	0		Arch-513	Elective-II	2	0
	Sub-Total	15				Sub-Total	16	



## DEPARTMENT OF PRODUCT & INDUSTRIAL DESIGN

### Dean

Prof. Dr. Ghulam Abbas Anjum

### Chairperson

Prof. Dr. Sabahat Alamgir

### Assistant Professor

Ms. Fariha Saeed

### Lecturers

Ms. Asthma Khalid

Mr. Hassan Iftikhar

Mr. Sajid Khan

Ms. Aisha Hameed

Ms. Uroosa Naz

Ms. Arooj Zaidi

Ms. Anum Shamshad

Ms. Mona Gulzar

PRODUCT & INDUSTRIAL DESIGN



## DEPARTMENT OF PRODUCT & INDUSTRIAL DESIGN



development of product and product related services. They will be able to identify and solve problems of product design innovatively with sensitivity to humanistic, environmental & social concerns. The program equips the students with knowledge of design fundamentals, general knowledge in academic literacy and an understanding of business. The objective is to enable students to devise products and services based upon user oriented research, market analysis, ergonomics criteria and

### INTRODUCTION

The Department of Product & Industrial Design was established in the year of 2006 with aim to generate professionals in the field of Product Design with technological, managerial and entrepreneurial skills for emerging needs of the industry. The department provides standard Product Design education at bachelor level and have commenced post graduate program in the year 2016. The offered courses equip students with skills and knowledge necessary not only for industrial designing but also for the students who can pursue various choices of career after graduation; the graduates will be industrial / product designers, design managers, entrepreneurial, designer for product manufactures and trading companies or employed product design consultancies. The program is to prepare students for a professional career and

engineering knowledge and social and cultural responsibility to meet the emerging needs of market in Pakistan. After completion of four year studies almost 100% students progress into high quality graduate employment relevant to their qualification which demonstrates the success of the program. The awareness about the profession of industrial design and design in general has rapidly increased in the last decades. Since then need for more of the important contributions that design is making to economic, social and environmental imperatives has been abundantly recognized at all levels of government and within business circles. Since the role of designing in society has changed significantly in recent years. There is also an international demand for graduates in the field of design.



## DEPARTMENT OF PRODUCT & INDUSTRIAL DESIGN

Product design deals with the idea generation, concept development, testing and manufacturing or implementation of a physical object or service.

Product designers are strategic assets to companies that need to maintain a competitive edge in innovation. Innovation and experimentation is underpinned by theoretical, historical and contextual studies to facilitate students' development in both the conceptual and technical design skills required to work in the broader integrated product design field, and its specialist areas.

Broadly speaking, the role of the product designer combines art, science and technology to create tangible three-dimensional goods.

Product and Industrial Design involves the research and design of the whole range of consumer and capital products. These are as diverse as telephones and transportation, kitchen appliances exhibition systems. Ideally, the industrial designer works as part of a multidisciplinary team involving engineering, production and marketing.

### INSPIRING INNOVATION, DELIVERING SUCCESS

The program is likely to be of interest to students who:

- Have abilities, such as drawing and making that support design activity, as well as capability to work with technical information.
- Have an interest in the way products and systems relate to people and societies.
- Are interested in technology but want to develop their design creativity and wish to be

involved in the whole product development process.

- Are considering marketing but wish to develop new products as part of a marketing strategy
- Seeking flexibility in their career path.



As in other progressive countries, one of the persistent difficulties of offering this program has been overcome by the acquisition of experienced and innovative teaching faculty from a wide range of specializations, engineering, architecture, ceramics, graphics, sculpture and other relevant subjects. The present course covers technology, materials, design for mechanized production, aesthetics consideration as well as graphic projection for marketing along with theoretical aspects such as history of design, aesthetics etc. Versatility is an important ingredient required and instilled in the students in view of the expanding boundaries of product design. Endeavour has been made to formulate a well rounded course combining technical, theoretical and practical aspects of design.



## DEPARTMENT OF PRODUCT & INDUSTRIAL DESIGN

### PRODUCT & INDUSTRIAL DESIGN CURRICULUM

The curriculum in Product & Industrial Design provides education in three-dimensional design for commercial and artistic production. The curriculum combines industrial design courses with Art and Design foundation courses, Art History Courses, Design Electives, General Electives and General Education Units required by the university.

The Bachelor of Product and Industrial Design (B. PID) is an innovative four years full-time undergraduate program of study. The Bachelor of Product and Industrial Design may be awarded with honors based upon the quality of performance in the program and current Faculty regulations.<sup>1</sup>

The Bachelor of Product Design provides the skills for a career as a professional product designer. It brings together the creative 3D design culture of design, advanced technologies of engineering and the entrepreneurial spirit of business. The programme is designed to appeal to the aspirations of the new generation of young multi-skilled and multi-talented creative entrepreneurial students who seek a creative career.

Design education is not simply about learning skills or making beautiful objects. It is the training of young minds to develop innovative ideas that impact and contribute to the global community. The unique quality of the programme is its pedagogical emphasis on a holistic approach to design thinking and practice. Integrative studio-based design projects provide opportunities for the rich exchange of ideas and synergy for learning and development of design. It serves as the platform for students to be exposed to design issues primarily apart from other dimensions such as engineering, business and marketing. It is intended to have close collaboration with industry in the

formulation and execution of projects so as to enable students to develop a high level of professionalism. The programme is planned to be supported by existing resource in traditional workshop facilities as well as equipment for digital media application and prototyping in future. The work environment at the department is very friendly and comfortable, with considerable ratio of female students. There is strong interaction between students and teachers. The goal is to have designers who can synthesize technology and aesthetics in the service of human need. Graduates are anticipated to become leaders in the chosen field as self-starters making things happen.

### CAREER OPPORTUNITIES

The graduate in PID can work as Product & Industrial Designers, graphic designers, packaging designers, project coordinators, Architectural & Construction Product designers, product merchandisers, art installation designers and design managers.

### DEPARTMENTAL LABORATORIES

The department has following well equipped labs to meet the academic needs of the students and teachers:

- Computer
- Digital Graphics
- Ceramics / Wood



## BACHELOR IN PRODUCT AND INDUSTRIAL DESIGN– RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
PID-101	Fundamentals of Design -I	2	2.5		PID-111	Fundamentals of Design -II	2	2.5
PID-102	Visual Communication	0	2		PID-112	Technical Drawing	0	1.5
PID-103	Materials and Technology – I	2	1		PID-113	Materials and Technology – II	2	1
PID-104	History of Creative Arts and Design – I	2	1		PID-115	Digital Graphics	0	2.5
PID-105	Introduction to Computers	1	1		ME-100	Workshop Practice	0	1
IS-101	Islamic and Pakistan Studies -I	3	0		MA-114	Applied Mathematics	3	0
HU-111	Communication Skills	0	1					
	Sub-Total	18.5				Sub-Total	15.5	
Year 2								
Semester 3					Semester 4			
PID: 201	Product Design-I	2	2.5		PID-211	Product Design-II	2	2.5
PID: 202	Ergonomics	2	1		IME-253	Work Study & Ergonomics	2	1
PID: 203	Advance Materials & Science	2	1		PID-215	Advance Computer Aided Design	0	3.5
PID: 204	History of Creative Art & Design-II	2	1		PID-216	Aesthetics	2	0
PID: 205	Computer Aided Design	0	2.5		MA-244	Probability and Statistics	2	1
HU-221	Technical Writing & Presentation Skills	3	0		IS-201	Islamic and Pakistan Studies -II	3	0
	Sub-Total	19				Sub-Total	19	
Year 3								
Semester 5					Semester 6			
PID-301	Product Design-III	2	2.5		PID-311	Product Design-IV	2	2.5
PID-302	3d-Modeling	0	2.5		PID-313	Graphic Design	2	2
PID-303	Photography	1	1		PID-314	Research Methodology	2	1
PID-304	History of Creative Art & Design-III	2	0		PID-315	Introduction to Management	1	1
PID-305	Computer Modeling & Rendering	0	2.5		ME-229	Mechanics of Materials and Machine Design	3	0
PHY-301	Packaging Physics	2	1					
	Sub-Total	16.5				Sub-Total	16.5	
Year 4								
Semester 7					Semester 8			
PID-401	Product Design-V	1	3		PID:411	Final Year Project -II	0	12
PID-402	Final Year Project -I	0	6		PID:412	Professional Practice	2	1
MGT-413	Entrepreneurship	3	0					
PID-403	Elective	2	1					
	Sub-Total	16				Sub-Total	15	

## DEPARTMENT OF CITY & REGIONAL PLANNING

### CITY & REGIONAL PLANNING

#### Department of City and Regional Planning

**Dean**

Prof. Dr. Ghulam Abbas Anjum

**Chairman**

Prof. Dr. Rizwan Hameed

**Professors**

Dr. Obaidullah Nadeem  
Dr. Shaker Mahmood Mayo  
Dr. Ijaz Ahmad

**Associate Professors**

Dr. Amir Aziz

**Assistant Professors**

Dr. Muhammad Asim  
Dr. Atif Bilal Aslam  
Dr. Zareen Shahid

**Lecturers**

Mr. Arif Hussain  
Ms. Saima Raifq



## DEPARTMENT OF CITY & REGIONAL PLANNING

### INTRODUCTION

The Department of City and Regional Planning (CRP) is contributing to nation building through its graduates since 1962. It is considered at top of all the planning institutions in the country for offering quality education comparable with any university of the technologically advanced countries. The Department has also attracted candidates from several other countries. Many Overseas Pakistanis living in Middle Eastern countries prefer to send their children to this department, since it is providing internationally recognized degrees in CRP. Majority of faculty members of the Department are foreign qualified and holding Ph.D. degrees. They are active researchers conducting research to find innovative solutions to plan and manage the human settlements in a more sustainable manner.

### NATIONAL AND INTERNATIONAL RECOGNITION

The Department aspires to rise as one of the best and world renowned centres of excellence in City and Regional Planning education, research and advisory services. In this context it is worth mentioning that the B.Sc., M.Sc. and Ph.D. degrees offered by the Department are recognized and accredited by the HEC, Pakistan Council of Architects and Town Planners (PCATP), and Institute of Planners Pakistan (IPP). In addition, the Department has long-established and time-honoured recognition by International Institutes of City and Regional Planning and the associated professional bodies all over the world

such as Asian Planning Schools Association (APSA).

The Department also has established academic links with other institutions of related fields in the country and abroad. Our Master's degree courses have been developed through foreign link programmes. Some of the important institutions with whom this Department had formal link programmes included:

- University of Edinburgh, Edinburgh, United Kingdom
- Heriot Watt University, Edinburgh, United Kingdom

Recently, the Department has signed a Memorandum of Understanding with the Department of Geography and Planning, School of Environmental Sciences, the University of Liverpool, seeking collaboration in the areas of research, extension lectures and exchange of students and teachers.

### COURSES OF STUDY

The Department offers following courses of studies:

- B.Sc. City & Regional Planning
- M.Sc. City & Regional Planning
- M.Sc. Community Dev. & Environmental Management
- M.Phil. City & Regional Planning
- Ph.D. City & Regional Planning

### B.SC. CITY & REGIONAL PLANNING COURSE

The curriculum for the eight semesters of B.Sc. course in City & Regional Planning is designed to produce professionals who can serve

as development managers of our urban and rural areas. Several new courses have been introduced, keeping in view the market demand and skills pertaining to entrepreneurship and cutting edge technologies. Planning is an interdisciplinary field which deals with the social, economic, and physical aspects of the society and the built environment. Therefore, the graduates of this Department are trained not only in planning and engineering subjects but also in management and social sciences. Some of the new courses designed are: Entrepreneurship, Industrial Estate Planning and Design, Development Economics, Climate Change Adaptation & Disaster Management, Urban Regeneration and Conservation, GIS Analysis and Applications, Active citizenship and Development Planning, and Professional Planning Practice. Other core planning and urban management courses offered in this programme include: Master Planning, Environmental Planning and Management, Estate Management, Research Methods, Finance Planning and Management, Regional Planning, Planning of New Towns, Urban Design, Transportation Engineering, Land use and Building Control, Housing and Urban Development etc.

The practical component embraces study and preparation of Master Plans, Planning of New Towns, Design of Commercial Areas, Industrial Estates, Transportation Plans, and Landscape Designs. These also involve extensive use of Spatial and Planning

## DEPARTMENT OF CITY & REGIONAL PLANNING

AutoCAD, SPSS and MS Office etc. Overall, the students are equipped with analytical and presentation skills demanded by the public and private sector employers.

### FIELD WORK

Urban and Regional Planning deals with critical questions like: how the cities and regions are functioning? What are the challenges and possible solutions to making them socially and economically vibrant but environmentally sustainable? Planning related decisions certainly have significant impact on the way cities and regions grow and the quality of life they offer. Thus, cities and regions are the real field laboratories for Town Planners. Lahore being a metropolitan city provides with an excellent blend of planned and unplanned

development and a population with diversified socio-economic background.

Our assignments are based on analysis of the problems being faced by people and their perceptions and preferences for the future. The practical component of most of the courses predominantly includes surveys of various parts of Lahore as well as other cities not only in the Punjab but also throughout Pakistan. The Master Planning course includes two weeks long visit to any city of the country conducting various surveys, viz. land-use, socio-economic, transportation, utility services, industries and public facilities etc. The University provides the students with free transport and accommodation in the city selected

after consultation with the students.

### EXTENSION LECTURES

Cities are expanding like dynamic entities and getting complex due to population exodus from rural to urban areas, rising number of motor vehicles, and increasing manufacturing and trading activities. In order to enable our students to understand these complexities and strike a balance between the environment and development, academia and field experts from technologically advanced countries like Germany, England and the New Zealand etc are invited to deliver extension lectures. Seasoned Town Planners and allied professionals from Government departments and private consultancies are also frequently engaged for this purpose.



## DEPARTMENT OF CITY & REGIONAL PLANNING

### **LGEOGRAPHIC INFORMATION SYSTEM (GIS) LABORATORY**

The GIS laboratory of the Department is equipped with latest desktop computers having Core i7 processors to facilitate use of satellite imageries for spatial data analysis and planning. The laboratory is also equipped with modern scanning and printing facilities.

### **IBRARY AND EQUIPMENT**

The Department has a well-stocked library, with a wide range of latest books, international journals, reports and other documents related with the field of City & Regional Planning. The departmental library was established with the assistance of the British Government. Several new books are added every year. All the lecture rooms/design studios are equipped with modern audio visual aid such as interactive smart boards with ultra-short throw multimedia projectors and public address systems.

The Department has also got latest mapping/planning and survey equipment such as global positioning systems and total station, digital planimeters, pantographs, colour plotters, laser jet printers and scanners. In addition, the state of the art

environmental and transportation planning equipment like noise level meters for noise pollution studies, spectro photometer for chemical testing of water and flue gas analyzer for automotive and industrial emissions testing are available.



### **SEMINAR AND CONFERENCE ROOMS**

The Department has established state of the art seminar and conference rooms. Both are air-conditioned and equipped with smart boards. Symposia and extension lectures of world renowned research scholars, professional planners and students' discussion forums are frequently held in these rooms.

### **RESEARCH EXTENSION AND ADVISORY SERVICES**

The Department has demonstrated its capabilities to disseminate

knowledge beyond the four walls of the Campus by holding seminars, workshops and symposia for this purpose. The faculty members also extend consultancy and advisory services to government and non-governmental organizations. The Department has undertaken a

number of planning projects such as preparation of Master Plans, Katchi Abadi Improvement Plans, and designing of Housing Schemes. The Department worked with ERRA for the rehabilitation and reconstruction of earthquake hit areas of Azad Jammu & Kashmir

and prepared master plan for Bagh Town. The Department extended its volunteer services for the rehabilitation of flood affected settlements in the Punjab as well. The Department has been providing advisory services to the concerned departments of the Government of Punjab especially the Urban Unit and the Lahore Development Authority in formulation of policies and conducting joint surveys. The Department also intends to provide consultancy services for the land use and transportation planning of various cities of the Punjab.



## B.SC. CITY & REGIONAL PLANNING – RECOMMENDED SCHEME OF STUDIES

Year 1								
Code	Title	Credit Hours			Code	Title	Credit Hours	
		Theory	Lab				Theory	Lab
Semester 1					Semester 2			
CRP-101	Introduction to City and Regional Planning	3	0		CRP-104L	Mapping and Remote Sensing	1	2
CRP-102	Technical Drawing	0	2		CRP-105	History of Urban Planning	2	0
HU-001	Functional English	3	0		CRP-106L	Transportation Engineering	2	1
CRP-103	Computer Aided Design and Modeling	0	2		IS-101	Islamic and Pakistan Studies-I /Ethics and Pakistan studies –I	3	0
CE-101L	Elementary Surveying	3	1		MA-141	Applied Statistics	3	0
MA-114	Applied Mathematics	3	0		CY-131/ PHY110	Environmental Chemistry I / Applied Physics*	2	1
	Sub-Total	17				Sub-Total	17	
Year 2								
Semester 3					Semester 4			
CRP-201L	Environmental Planning and Management	3	1		CRP-206	Sociology	2	0
CRP-202L	Architectural Design	1	2		CRP-207L	Housing and Urban Development	2	1
CRP-203	Applied Geography	2	0		CRP-208L	Transportation Planning	2	1
CRP-204	Information Technology and Database Management	0	3		CRP-209L	Introduction to GIS	1	1
HU-200	Technical Report Writing	3	0		IS-201	Islamic and Pakistan Studies/Ethics and Pakistan Studies-II	3	0
CRP-205	Development Economics	2	0		HU-111	Communication skills	0	1
PID-207	Workshop Practice (Model Making)	0	1		CRP-210L	Planning Surveys	1	2
	Sub-Total	18				Sub-Total	17	
Year 3								
Semester 5					Semester 6			
CRP-303L	Environmental Engineering	3	1		CRP-309L	Research Methods	2	1
CRP-304	Planning Law	3	0		CRP-310L	Industrial Estate Planning and Design	1	1
CRP-305L	Urban Regeneration and Conservation	2	1		CRP-311L	Landscape Design	1	1
CRP-306L	Planning of New Towns	2	2		CRP-312L	Building Construction Technology	2	1
CRP-307L	GIS Analysis and Applications	1	1		CRP-313L	Urban Design	2	1
CRP-308	Climate Change Adaptation and Disaster Management	2	0		CRP-314	Active Citizenship and Development Planning	2	0
	Sub-Total	18				Sub-Total	15	
Year 4								
Semester 7					Semester 8			
CRP-401L	Master Planning – I	2	2		CRP-407	Project-II	0	3
CRP-402L	Finance Planning and Management	2	1		CRP-408L	Master Planning – II	1	2
CRP-403L	Project Planning and Management	1	1		CRP-409L	Estate Management	1	1
CRP-404L	Professional Planning Practice	1	2		CRP-410L	Land use and Building Control	2	1
CRP-405L	Rural Development Planning	2	0		CRP-411L	Regional Planning	2	1
CRP-406	Project –I	0	3		MGT-413	Entrepreneurship	3	0
	Sub-Total	17				Sub-Total	17	

# FACULTY OF NATURAL SCIENCES, HUMANITIES & ISLAMIC STUDIES

Department of Chemistry  
Department of Mathematics  
Department of Physics

Department of Humanities  
Department of Islamic Studies  
Institute of Business & Management



## DEPARTMENT OF CHEMISTRY



### **Dean**

Prof. Dr. Muhammad Shahid  
Rafique

### **Chairperson**

Prof. Dr. Syeda Rubina Gilani

### **Associate Professors**

Dr. Farhat Yasmeen  
Dr. Humayun Ajaz  
Dr. Arjumand Iqbal Durrani  
Dr. Aisha Munawar

### **Assistant Professors**

Dr. Abdul Ghaffar  
Dr. Ashi Rashid  
Ms. Hina Saleem  
Dr. Zahoor Ahmad

### **LECTURER**

Dr. Khurram Saleem Joya

### **INTRODUCTION**

The history of Department of Chemistry is as old as 1923. It was known as “Science Department” in the days of Maclagan Engineering College Lahore, which offered the

subjects of Chemistry, Physics and Mathematics to Engineering disciplines. However, an independent Department of Chemistry was established in 1961, when Maclagan College of Engineering was upgraded to University, presently University of Engineering and Technology, Lahore. It was a supporting department for teaching applied chemistry courses to engineering disciplines until 1994.

The Department started M.Sc Applied Chemistry program in 1995. While the M.Phil program in Chemistry was started after 2000. The

Department is also offering applied chemistry courses to various Engineering disciplines that include Electrical, Chemical, Polymer, Metallurgical, Mining, Industrial and Manufacturing, Geological and Petroleum & Gas Engineering.

Compulsory factory training is a part of M.Sc curriculum. The main objective of the training is to establish collaboration between Chemistry Department and industry and to develop professional approach in the students.



## DEPARTMENT OF CHEMISTRY

Promotion of higher education and Postgraduate Research continues to be the main objective of the Department. The development of new fields and discoveries in chemistry are incorporated into courses by regularly upgrading the curriculum. The curricula and syllabi are relevant to the HEC criteria and international standards. The department offers courses in a number of specialized areas like Electrochemistry and clean Energy, Green Chemistry, Environmental Chemistry, Coordination Chemistry, Material Chemistry, Organic Geochemistry, Natural Product Chemistry, Advanced NMR Spectroscopy, Inorganic Mass

Spectrometry, Analytical Chemistry, Bioinorganic Chemistry, Advanced Color Chemistry and Technology, X-Ray Diffraction Techniques, Polymer Chemistry, Organometallic Chemistry and Food Chemistry & Technology.

There are several well-equipped laboratories having a number of modern instruments like UV-Visible Spectrophotometer, FTIR, Atomic Absorption Spectrophotometer, GC-FID, GC-FPD, GC-MS, HPLC-UV, High Temperature Furnaces, Polarimeters, Potentiometer, EDAC, Incubator Shaker, High Speed Control Centrifuge, Low Temperature Incubators Vacuum

Pumps, Kjehldahl Apparatus, Soxhlet Apparatus, Schilink Lines, some Electrochemical Instruments, Fluorescence Spectrophotometer (cary eclipse), ATR (cary 630 FTIR), Refractometer (Abbemat 500), Polarimeter (MCP 500), Potentiostat, Ultra-Low Temperature Freezer (U360 Innova), Thermo Scientific Barnstead Smart 2 Pure water (2 No.), Eliza Reader Laminar Flow Hoods, Cool Incubators, Dry Incubators, Oven, Freezer, Orbital Shaker, Spectrophotometer, Antibacterial and Antifungal facility, Colony Counter etc. In addition, there is a Departmental Library and I.T, Computer Laboratory to facilitate the Students.

The Department has highly qualified faculty to meet the diverse needs of curriculum. It is committed to educate and train Students through effective teaching and research. The Department features enriched educational and research environment that reflects its tradition of dedication and commitment to the profession. The academic staff of the Department has published a large number of publications in journals of national and international repute. The dedication of our faculty towards teaching and research has made Department one of leading



## DEPARTMENT OF MATHEMATICS

### MATHEMATICS

#### Dean

Prof. Dr. Muhammad Shahid  
Rafique

#### Chairman

Prof. Dr. Muhammad Mushtaq

#### Associate Professors

Dr. Sabir Hussain  
Dr. Asma Rashid Butt  
Dr. Qasim Ali Ch.

#### Assistant Professors

Mr. Muhammad Naeem  
Dr. Shafique-ur-Rahman  
Dr. Samia Azhar  
Mrs. Rubina Fayyaz  
Ms. Saima Nazir  
Dr. Muhammad Irfan Qadir  
Dr. Anjum Pervaiz  
Dr. Mustafa Habib (TTS)  
Mrs. Samina Saeed Khan  
Mr. Kashif Ali Khan  
Dr. Saadia Farid

#### Lecturers

Ms. Faiza Bushra  
Mr. Abdur Rehman Khan Salari

The Department of Mathematics is one of the oldest departments of the University of Engineering and Technology, Lahore. It was established in 1961. Department of Mathematics not only runs its own programs like M. Phil in Applied Mathematics and Ph.D in Mathematics, but also provides its services to all disciplines



of engineering and technology, and business to make their students capable enough to apply the tools of Mathematics for solving the problems occurring in their respective areas of study. The teaching faculty feels the responsibility to impart the knowledge of Mathematics with innovation so that the students might be able to understand and give solutions to the complex engineering, science and business problems of this modern era.

#### MISSION

The Department of Mathematics provides the students with an environment where they may learn foundations, applications and creative approaches related to mathematical and engineering problems. Thus, contributing to research services for science and engineering and giving students opportunities to collaborate with other researchers to broaden the

scopes for further new mathematical approaches.

#### RESEARCH EXTENSION & ADVISORY SERVICES

Research is an essential component of the academic pursuits of the faculty members and the postgraduate students. The work of the faculty is published in national and international journals. The department has a computer laboratory equipped with personal computers along with the internet facility. The Department also offers Mechanics Lab at undergraduate level to various engineering departments. This not only improves the practical training of the students but also develops the skill of viva voce, etc. A large number of institutions and organizations seek consultancy and advisory services of the faculty members and benefit from their expertise.

## DEPARTMENT OF PHYSICS



### Dean

Prof. Dr Muhammad Shahid Rafique

### Chairman

Prof. Dr Anwar Latif

### Professors

Dr. Rehana Sharif  
Dr. Muhammad Iqbal

### Associate Professors

Dr. Rashid Jalil  
Dr. Shamailla Shahzadi  
Dr. Ibtsam Riaz

### Assistant Professors

Dr. Abdul Waheed Anwar  
Dr. Ahmad Shuaib  
Ms. Umber Kalsoom  
Dr. Usman Ilyas

### COURSES OF STUDY

The Department was established in 1962 and offers the following Postgraduate programs:

1. M.Phil. Applied Physics
2. Ph.D. Physics

The faculty is highly qualified, motivated and includes fifteen members with a Ph.D. The interdisciplinary curriculum

Dr. Ishrat Mubeen Dildar  
Mr. Muneeb Irshad  
Ms. Saba Majeed Gondal  
Ms. Amina Afzal  
Dr. Jaweria Zartaj Hashmi  
Dr. Saima Shaukat  
Mr. Haamid Jamil

### Lecturers

Dr. Sofia Siddique

### LASER & OPTRONICS CENTER

#### Director

Prof. Dr Muhammad Shahid Rafique

### Professor

Dr Khurram Siraj

### Associate Professor

Dr Khurshid Aslam

draws on faculty expertise in many areas of Applied Physics and includes such courses as Laser Physics, Plasma Physics, Nanotechnology, Health & Medical Physics, Photonics & Optoelectronics, Applied Optics, Applied Atomic & Nuclear Physics, Solid State Physics, Computer Science and its applications and Electronics, etc.



## DEPARTMENT OF PHYSICS

The curriculum of M.Phil. in Applied Physics balances many important dimensions of both General and Applied Physics employing both conceptual and technical approaches. The programs provide students with a solid base of general skills through core courses and then enriches that knowledge through specialized advanced electives, laboratory work and research in various fields of Physics. The students are expected to undergo research projects with the guidance and supervision of a highly qualified faculty. The department has produced 234 M.Phil. and 466 M.Sc. students so far, who are serving in different



educational institutes like Lahore College for Women University, G.C. University, Lahore, F.C. College University, PIEAS, etc. R & D Organizations like PAEC, NESCOM, OPTICS Lab. KANUPP, etc. and in the field of Medical Physics in Shaukat Khanum Hospital, INMOL, etc. The department has also produced 07 Ph.D. and

28 are pursuing their Ph.D. degrees. There are six well equipped laboratories in the department. The Research work is backed up by the state-of-the-art equipments where students have the opportunity to perform experiments of advanced level with the special emphasis on the applied concepts of Physics.

### THE DEPARTMENT HAS ALSO TWO FULLY EQUIPPED ADVANCED RESEARCH CENTERS:

#### (I) Laser & Optronics Center

This center provides research facilities in lasers, laser material interactions, laser produced plasma, Optoelectronics and photonics, etc. The main equipment includes high power femto-second Ti-Sapphire Laser, Nitrogen Laser, Nd: YAG Laser, Diode Lasers, Krf & XeCl Excimer Laser, high resolution three stage optical microscope, heating furnace, Nanodiamond Fabrication Facility, Solid Oxide Fuel Cell Fabrication Facility and much and much other equipment related to above mentioned fields.

#### (ii) Nanotechnologies Research Center

The Nanotechnology Research Center (NRC) was established in 2008 in Department of Physics to focus on precision engineering or tailoring of materials at nano scale. In addition to provide the nano scale research facilities, the NRC also has created programs to attract researchers and to facilitate the scientists.

## DEPARTMENT OF PHYSICS

**Nanotechnology Research Center (NRC) has the following state-of-the-art laboratories:**

1. Nanofabrication
2. Diagnostic & Characterization

In which, the following equipments have been installed and are currently in operation.

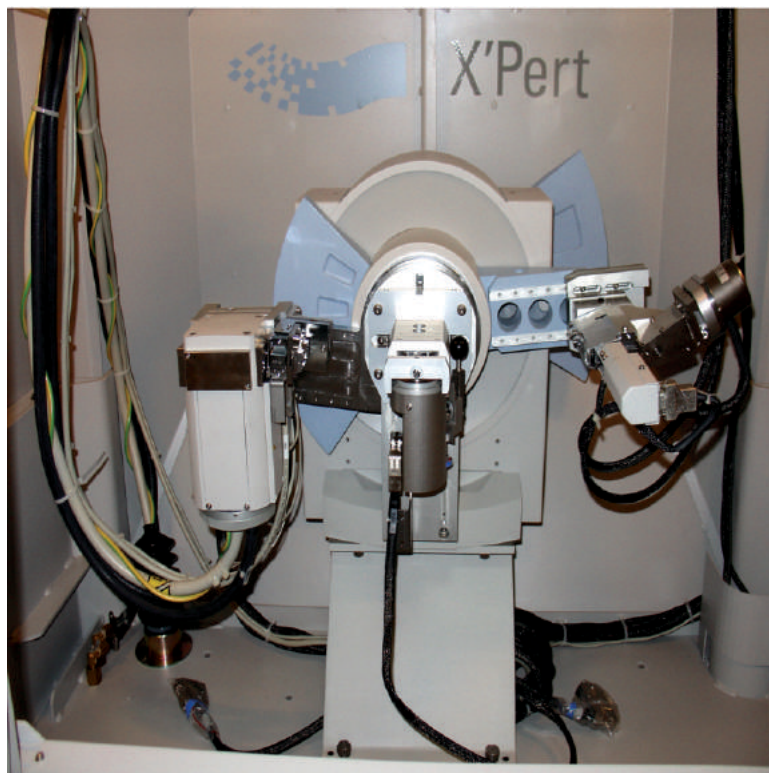
- a. Atomic Force Microscope (AFM)
- b. Raman Spectrometer
- c. AC Electrodeposition set up
- d. DC Electrodeposition set up
- e. Magnetic Field Annealing System
- f. Multifunctional Generator
- g. Magnetic Stirrer with hot plate
- h. Analytical Balance
- i. Power Supplies

The research laboratories in the Department are well equipped and have the research facilities like Vacuum Systems (turbo molecular pump, Diffusion and Rotary pumps, vacuum gauges like Pirani gauge, Ionizing gauge etc), Vacuum Chambers, etc. Spectrometer, Photomultipliers, Digital Storage Oscilloscope and Transmission Optical Microscope. Two Laser Systems KrF Excimer (UV) & Nd: YAG (IR) are also in operation to facilitate the postgraduate and Ph.D. students to perform experiments on laser-matter interaction, plasma formation and to study radiation emission from laser produced plasmas.

Besides this, a Panalytical X'Pert Pro X-Ray Diffractometer and Scanning Electron Microscope (SEM) have been installed to facilitate researchers and industry to perform

structural and morphological analysis of different samples. The Department also provides its expertise in the above mentioned areas at National and International level to researchers and industry.

The department also offers courses of Applied Physics at undergraduate level to majority of engineering departments, computer science and architecture department. The curricula of the courses cover many branches of physics including recent developments in the subject. These are reviewed periodically to keep them abreast with the rapid changes occurring in the Engineering disciplines and the correlative areas of Physics.



## DEPARTMENT OF HUMANITIES, MANAGEMENT & SOCIAL SCIENCES

### Dean

Prof. Dr Muhammad Shahid Rafique

### Chairperson

Prof. Dr Muhammad Shahid Rafique

### Assistant Professors

Mr Muhammad Ajmal Khurshid

Ms Alia Saleem Naushahi

Ms Mehvish Riaz

Ms Amna Ali Niazi

### Lecturer

Mian Muhammad Rauf Akhtar

Ms Sadia Khan



### INTRODUCTION

The general objective of the courses in the Department of Humanities and Management Sciences is to groom students and broaden their perceptions according to the dictates of modern times. The department offers courses such as Communication

Skills, Functional English, Report Writing, Industrial and Engineering Economics, Project Management, Consumer Behavior, Marketing, Economics for Planners and other management subjects. Since engineers are responsible members of commercial enterprises and technical associations of a relatively high caliber, these disciplines help them to perform better in their job assignments and become high achievers in their respective fields.

English being the medium of instruction for all technical and scientific disciplines in Pakistan, the department offers courses in Technical English and Technical Report Writing. The department also offers a course entitled Ethics and Pakistan Studies, especially designed for Non-Muslim students, who take it up in lieu of a compulsory course that is Islamic and Pakistan Studies. Short courses in Spoken English are also taught specially in summer.





## DEPARTMENT OF ISLAMIC STUDIES

### Dean

Prof. Dr Muhammad Shahid Rafique

### Chairman

Dr Irfan Khalid Dhillon

### Professor

Dr Hafiz M. Israiel Farooqui

### Associate Professors

Dr Atiq ur Rahman

Dr Hafiz Muhammad Shahbaz

### Assistant Professors

Dr Hafiz Zahid Latif

Mr Muhammad Nadeem Shah

Ms Gul Saria Ashraf

Dr Tanveer Qasim

Dr Hafiz Qudratullah

### INTRODUCTION

The curricula in the University includes compulsory and optional subjects. Islamic & Pakistan studies is a compulsory subject. The underlying purpose of teaching this subject to the students of engineering disciplines is to impress upon them the richness of Islamic culture, heritage and civilization and the role played by Islamic ideology in guiding the Muslims of the sub-continent towards their most cherished goal of an independent home land, Pakistan. After inculcating in them the Cultural, Social, Economic, Political and historical aspects of Islamic civilization, the students would be able to protect and promote Islam, not only as a religion but as a system in Pakistan and in the world as well.



### COURSES OFFERED

For the realization of these objectives, the Islamic Studies was introduced in the University as an optional subject in 1961. In the subsequent years, due to its importance this subject was made compulsory for all the Muslim students and its scope was progressively enlarged. Now the department teaches Islamic Studies to all undergraduate programs. In 1982, the Government of Pakistan prescribed Pakistan Studies as an essential component of the syllabi at all levels of education. Since then the Department is also teaching this subject. Moreover, Islamic & Pakistan Studies is included as a compulsory subject in the affiliated colleges, Rachna College, KSK, Faisalabad and Narowal Campuses.

### FACULTY

The Faculty members of the department have over the time, excelled in their academic field and research as well. Some of them were awarded merit certificates in their academic careers. The faculty members have been producing research papers and articles in the quality research journals of national and international fame. Some are the authors of books. Their productive research work have highlighted social, economic and political problems of the country and suggested feasible solutions. Moreover, the department has a computer laboratory and a library rich with high quality research books. In addition to all these activities, one faculty member of the Department has been delivering Friday Sermon in Jamia Mosque UET.

# INSTITUTE OF BUSINESS & MANAGEMENT

**Dean and Director**  
**PROF. DR. MUHAMMAD SHAHID**  
**RAFIQUE**

## ASSISTANT PROFESSORS

Dr. Muhammad Fiaz  
 Dr. Asif Mahmood  
 Dr. Bilal Aziz  
 Dr. Rab Nawaz Lodhi  
 Dr. Abdul Aziz Khan Niazi  
 Dr. Zia Ur Rehman  
 Dr. Tehmina Qazi  
 Dr. Muhammad Shoib Farooq

## LECTURERS

Mr. Farman Afzal  
 Ms. Samreen Malik  
 Ms. Sarakanwal  
 Ms. Maryam Farooq  
 Ms. Sadaf Razzaq  
 Ms. Aeisha Khan  
 Ms. Maria Khan  
 Ms. Rizwana Hameed  
 Ms. Mubasher Nazir  
 Mr. Muhammad Kamran  
 Ms. Rabianaseem  
 Ms. Qurat-ul-ain Akhtar  
 Mr. Zia-ul-haq  
 Mr. Aftab Shoukat  
 Mr. Saad Mahmood  
 Ms. Sumayya Zulfiqar  
 Mr. Farid Pervaiz Shami  
 Mr. Nabeel Rehman



## INTRODUCTION

In a rapidly changing business environment, there is a strong demand of management professionals who are equipped to achieve exceptional performance and make informed, knowledgeable and visionary decisions for the respective organizations. To meet this demand, University of Engineering and Technology Lahore established Institute of Business & Management (IB&M) in 2009. This is in line with the University's long tradition of offering innovative, progressive and industry oriented education.

At IB&M, a combination of robust curriculum, self-motivated students, inspiring faculty, high-tech business school premises and a myriad of premium UET student support services synergize into an unforgettable and rewarding experience.

## Degree Programs

The institute offers following degree programs:

### Undergraduate

- BBA (Honors)
- B.Sc. Management Science

### Postgraduate

- Masters
- MBA Executive

## INSTITUTE OF BUSINESS & MANAGEMENT

- MBA 3.5 (Marketing, Management, Human Resource & Finance)
- MBA 2.5 (Marketing, Management & Finance)
- MBA 1.5 (Marketing & Management)
- MBA Engineering
- MBA (Finance)
- MS (Marketing)
- MS (Management)
- Doctor of Philosophy
- Business Administration & Management Sciences

At IB&M, two computer laboratories are available that provide a wide-range computing environment that caters to the need of students, faculty and staff. The campus network operates on a high-speed fiber backbone with Gigabit uplinks and dedicated high-end servers and switches. One general purpose computer laboratory is available 12 hours a day, 7 days a week and has capacity to accommodate more

user empowered services. The library is equipped with over 6000 books related to curricula and general knowledge as well as periodic journals to support scholarly interests and practical research activities. In addition, there is a central library where state-of-the-art books are available for the related subjects. Electronic library also helps the research scholars and students to enhance their knowledge and bring creativity in innovative ideas.



### FACILITIES

IB&M has always relied on technology-intensive, challenging methods of teaching and learning.

than 100 students. The library at IB&M offers advanced systems and technologies and a wide array of

In the era of advance technology and competitive business environment, without creative notations, it is difficult to meet the mission and goals for an organization. IB&M organizes different demand driven activities as training programs, seminars, and workshops to increase the critical thinking of faculty members and students.

IB&M provides a well-furnished classroom environment for students including air-conditions, multi-media and backup solar energy system to study without interruption. At the building, Wi-Fi is available to facilitate the students for internet browsing.



# FAISALABAD CAMPUS

Department of Electrical, Electronics & Communication Engineering  
Department of Mechatronics and Control Engineering  
Department of Chemical & Polymer Engineering  
Department of Humanities, Basic Sciences & Islamic Studies



Campus Coordinator  
**Dr. Syed Waqas Ahmad**



## FAISALABAD CAMPUS

Faisalabad, the Manchester of Pakistan contributing major portion of Pakistan's GDP holds a campus of University of Engineering and Technology (UET) Lahore since 2004. The reason of choosing Faisalabad city for establishing a campus of UET was Faisalabad being third largest metropolis and a major industrial centre in the heart of Pakistan.

Healthy academic environment

with highly qualified faculty members, state of the art laboratories, dedicated academic and administrative staff; all add to the production of competent and professional engineers at the campus.

Other than many industries, Faisalabad is renowned for its textile industry. There was no department offering degree in the field of Textile at UET. To cope up

with this, a Centre of Advancement of Textile Engineering and Technology was established at Faisalabad. Other than Textile, the campus has the following departments:

- **Department of Electrical, Electronics and Communication Engineering**
- **Department of Mechatronics & Control Engineering**
- **B.Sc Chemical Engineering**
- **B.Sc Textile Engineering**

## DEPARTMENT OF ELECTRICAL, ELECTRONICS AND COMMUNICATION ENGINEERING

### Assistant Professors

Dr. Muhammad Akram  
Dr. Faizan Dastgeer  
Mr. Hasan Erteza Gelani  
Mr. Muhammad Nasir

### Lecturers

Dr. Muhammad Irfan  
Mr. Muhammad Ahsan ul Haq  
Mr. Haseeb Hussain  
Mr. Kamran Daniel  
Ms. Hira Tahir  
Ms. Zeba Idrees  
Mr. Habibullah Manzoor  
Mr. Zain Shabir  
Mr. Waseem Arshad  
Mr. Rameez Javed  
Mr. Azeem Iqbal  
Mr. Moeed Sandhu  
Mr. Ali Raza

Mr. Zain Murtaza  
Ms. Munazza Sadaf

### INTRODUCTION

The advancing theoretical and practical research in the field of electrical engineering has called for the production of highly competent engineers. The department of electrical engineering at Faisalabad campus offers its students mature academic facilities so that they can compete with the world's pace of advancement. The first two years of study comprise of basic electrical engineering courses along with the courses from basic sciences. The third year offers core electrical engineering courses that help students to make up their choice for fourth year where they have the liberty to adopt between advance courses of Power, Electronics and Communications.

### COURSES OF STUDY

The department offers:

- B.Sc. Electrical Engineering

### LABORATORIES

The following laboratory facilities are available at the department

- \* Electric Circuits
- \* Semiconductor Devices
- \* Electric Machines
- \* MicroProcessor Systems
- \* Antenna and MicroWave
- \* Analog Electronics
- \* Digital Electronics
- \* Communication Systems
- \* Power Electronics
- \* Electrical Instrumentation
- \* Power Systems
- \* Physics
- \* Control Systems
- \* Digital logic Design

## DEPARTMENT OF MECHATRONICS & CONTROL ENGINEERING

### Assistant Professor

Dr. Nasir Ahmad

### Lecturers

Ms. Ammara Kanwal

Ms. Urwa Arif

Mr. Shoaib Aslam

Mr. Aamir Mehmood

Mr. M. Usman

Mr. S. M. Umar

### INTRODUCTION

Mechatronics is amalgam of Mechanical and Electrical Engineering. The need of Mechatronics arose as a result of

requirement of professionals in both Mechanical and Electrical domains in industries as well as in research. The department at Faisalabad campus equipped with state of the art laboratories fulfils the need of time. The department offers complete understanding of Mechanical Devices in coordination with Electrical Devices so that the students learn the root and stem benefits of Mechatronics.

### COURSES OF STUDY

The department offers:

- **B.Sc. Mechatronics and Control Engineering**

### LABORATORIES

- Embedded Systems
- Instrumentation and Measurement
- Industrial Automation
- Mechanics of Materials
- Simulation
- Power Electronics
- Control Systems
- Engineering Mechanics
- Thermodynamics
- Simulation Lab

## DEPARTMENT OF CHEMICAL & POLYMER ENGINEERING

### Chairman

Dr. Syed Waqas Ahmad

### Assistant Professors

Dr. Azam Saeed

Dr. Khalid Mehmood

Ms. Rabia Sharif

Ms. Saira Bano

Mr. Haji Ghulam Qutab

### Lecturers

Mr. Farhan Javed

Ms. Iqra Saleem

### INTRODUCTION

Chemical industry requires highly qualified and competent professionals for its growth. The department at Faisalabad campus

with its highly qualified and professionally trained faculty members maintains excellent repute of producing engineers with professional abilities. The department holds well equipped laboratories to coordinate the theoretical knowledge with practical skills in quite a successful fashion. The course of study starts with the first two years focusing on the basics of Chemical Engineering. The third year holds the importance of backbone, where in depth knowledge of Chemical Engineering is given to the students. The fourth year is specialization year in which students specialize in different fields of Chemical Engineering.

### COURSES OF STUDY

The Department offers:

#### **B.Sc. Chemical Engineering**

### LABORATORIES

- Chemical Process Industries
- Heat Transfer
- Fluid Flow
- Environmental Engineering
- Thermodynamics
- Mass Transfer
- Particle Technology
- Energy Engineering
- Chemical Reactor Design
- Chemistry
- Unit processes
- Simultaneous Heat and Mass Transfer



## DEPARTMENT OF HUMANITIES, BASIC SCIENCES & ISLAMIC STUDIES

### Assistant Professors

Dr. Ghufrana Samin  
Dr. Muhammad Aslam  
Dr. Sajjad Ahmad  
Dr. Abdur Rehman  
Dr. M. Ilyas  
Dr. Faisal Nawaz  
Dr. Arshi Khalid  
Mr. Kamran Shaheen  
Ms. Shazia Karim  
Ms. Shumaila Noreen

### Lecturer

Ms. Nosheen Shahzadi

### INTRODUCTION

The requirement of the establishment of the department lies in the following:

- Besides being skillful and technically strong, an engineer must possess excellent communication skills in order to express his ideas.
- Islamic studies being a major

subject at undergraduate level all over the country.

- Mathematics is the mother of all sciences and engineering; a branch of science requires its students to be excellent at mathematics.
- The basic sciences that hold the base of engineering disciplines. One can never think of an engineer without the knowledge of basics of Physics and Chemistry.

## CENTRE OF ADVANCEMENT OF TEXTILE ENGINEERING & TECHNOLOGY

### Assistant Professors

Dr. Muhammad Mohsin  
Dr. Shaheen Sardar

### Lecturers

Mr. Muhammad Rehan  
Ms. Sidra Ghaffar  
Mr. Nasir Sarwar  
Mr. Muhammad Ahsan

### INTRODUCTION

Pakistan is the eighth largest exporter of textile products in Asia. The textile sector in Pakistan has an overwhelming impact on the economy, contributing 60% to the country's exports. This sector also provides employment opportunities to 30% of country's workforce. In today's highly competitive global

environment, the textile sector needs to upgrade its supply chain, improve productivity, and maximize value-addition to be able to survive. And that couldn't be thought of without competent professionals in the relative field. Faisalabad campus is privileged over other campuses of UET for holding a degree awarding department in Textile field.

The course of study is the composite one and consist of four sub fields:

- Spinning (Yarn Manufacturing)
- Weaving (Fabric Manufacturing)
- Wet Processing (Pre-treatment, Dyeing &

Finishing)

- Garment Manufacturing

The department started functioning in 2013 with highly qualified faculty and well equipped laboratories. There are more than 56 lab scale equipment installed in the department in the following labs.

### PROGRAM OFFERED

- B.Sc. Textile Engineering

### LABORATORIES

- Pilot Spinning
- Mini Spinning
- Weaving
- Pre-treatment, Dyeing & Finishing
- Testing (Physical & Chemical)
- SEM

## CENTRE OF ADVANCEMENT OF TEXTILE ENGINEERING & TECHNOLOGY

Department is working in close collaboration with the Pakistani textile industry. There are lot of research going on in the department and department published over 50 papers in last

four years including 30 impact factor papers. Total four PhD students are being supervised in the textile dyeing and finishing area. In addition, Department actively involved in signing of the MOU

between UET & Society of Dyers and Colourists, UK for future collaboration. Department also won the prize for Textile Processing Technologies at the 6th Invention to Innovation Summit 2017.

## COMMON FACILITIES AT THE CAMPUS

### COMPUTER LABORATORIES

Four computer laboratories equipped with modern computers and operating systems are available for the students of the Campus. A central network connects with the systems and the staff of network administrator is available round the clock for monitoring and maintenance.

### LIBRARY

Senior Librarian

**Mr. Mian Tahir Gohar**

The library has an excellent collection of books related to engineering as well as literature. Technical encyclopedias, dictionaries, handbooks all add to the value of the library at the campus. The books are opened for issuance by students and faculty. Access to the HEC digital library is also available for downloading research papers and handbooks.

### BOOK BANK

The book bank holds more than three thousand books available for the students of the campus. A student can issue as much as five books for the whole semester. The

strength of textbooks satisfactorily matches the strength of students of a particular semester so that maximum students get the benefit of textbooks.

### HOSTELS

The campus offers accommodation facility for the students domiciled other than Faisalabad. The hostel facility is provided on the basis of seniority and academic record.

### RESIDENT TUTORS

Mr. Hasan Erteza Gelani

Mr. Farhan Javed

Ms. Hira Tahir

Mr. Atif Khan

### TRANSPORT

The campus has its own fleet of buses for the transportation of students living in Faisalabad. The fleet includes four buses and two coasters. The fleet also serves for industrial visits as well as visits to the main campus for different purposes.

### CANTEEN

The students and staff are facilitated with a canteen on the top floor of

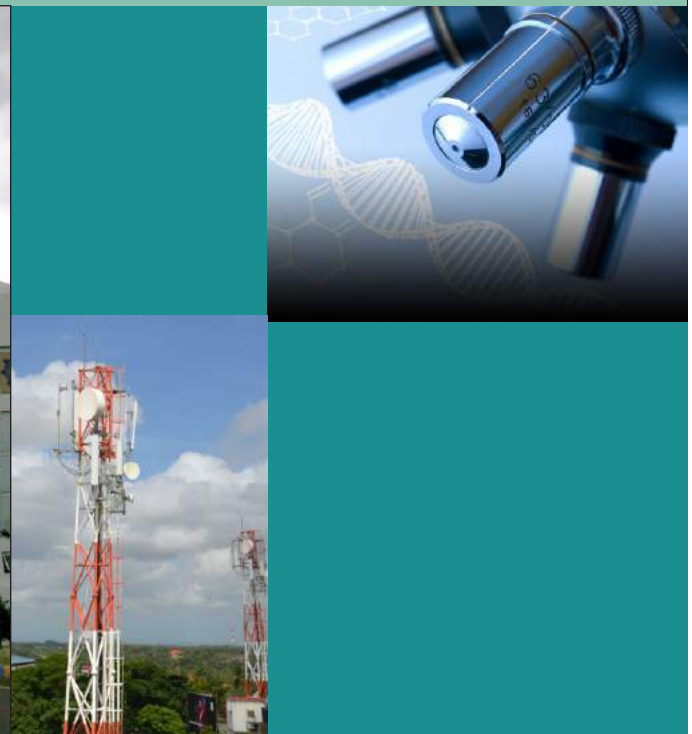
the library building so that they may refresh themselves during break time. Strict quality check is observed in this department.

### CO-CURRICULAR, EXTRA-CURRICULAR AND OTHER FACILITIES

Several societies work under a staff advisor, who is a faculty member, for organizing co-curricular and extra-curricular events. The campus provides the students plain grounds for sport activities. An annual sports activity is observed at the campus as well as students from other universities are welcomed to participate in different sport events. Literary and cultural events add to the flavor of co-curricular activities; our students are also encouraged to participate in the events held in other universities. A career development cell is also established whose prime job is to arrange training workshops and lectures by professionals from the industry. This aids in the development of university-industry liaison; students learn from the experience of speakers and become familiar with the environment of industries.

# KALASHAH KAKU (KSK) CAMPUS

Department of Chemical, Polymer & Composite Materials Engineering  
Department of Basic Sciences & Humanities  
Biomedical Engineering Center  
Department of Mechanical, Manufacturing & Mechatronics Engineering  
Department of Electrical, Electronics & Telecommunication Engineering



Campus Coordinator  
**Prof. Dr. Muhammad Zafar Noon**





## KSK CAMPUS

In order to fulfill growing national educational needs in engineering disciplines, the KSK campus was founded which is located on the link road connecting GT-Road with M2 near Kala Shah Kaku. It is spread over 313 acres. In the future, the Campus will incorporate all the undergraduate programs being offered by the University at the main campus.

The construction projects under the supervision of Project Director are, underway and rapid development in terms of infrastructure and academia is being carried out. The Campus has the following six academic Departments:

- Department of Electrical, Electronics and Telecommunication Engineering
- Department of Mechanical, Mechatronics and Manufacturing Engineering
- Department of Chemical, Polymer and Composite Materials Engineering
- Department of Basic Sciences and Humanities
- Center for Energy Research and Development
- Biomedical Engineering Center

KSK campus is offering Undergraduate and Postgraduate programs in following disciplines: Engineering Programs

- M.Sc. in Energy Engineering
- B.Sc. in Electrical Engineering
- B.Sc. in Mechanical Engineering
- B.Sc. in Chemical Engineering
- B.Sc. in Biomedical Engineering

### COMPUTER SCIENCE PROGRAM

- B.Sc. in Computer Science
- Technology Programs
- B.Sc. in Electrical Engineering Technology
- B.Sc. in Mechanical Engineering Technology
- B.Sc. in Chemical Engineering Technology
- B.Sc. in Biomedical Engineering Technology
- B.Sc. in Civil Engineering Technology

## DEPARTMENT OF CHEMICAL, POLYMER & COMPOSITE MATERIALS ENGINEERING

### • Chairman

Dr. Tanveer Iqbal

### Professor

Prof. Dr. Muhammad Zafar Noon

### Associate Professors

Dr. Saima Yasin

Dr. Syed Mohsin Ali Kazmi

### Assistant Professors

Dr. Sheema Riaz

Dr. Haider Ali

Dr. Asif Nadeem Tabish

Dr. Hamayoun Mahmood

Mr. Muhammad Rashid

Dr. Humaira Siddique\*

Dr. Rauf Razzaq\*

Ms. Asthma Khan\*

Ms. Shafaq Muzammil\*

Ms. Samreen Hameed\*

Mr. Izzat Iqbal Cheema\*

Mr. Muhammad Waqas Iqbal\*

### Lecturers

Dr. Muhammad Tajammal Munir\*

Ms. Qandeel Almas\*

Mr. Muneeb Soban Rathor\*

Mr. Zohaib Atiq Khan \*

Mr. Muhammad Irfan \*

Mr. Muhammad Imran Rashid\*

Mr. Ali Rauf\*

Mr. Haris Mehmood

Mr. Ahmad Shakeel

Mr. Muhammad Sulaiman

Mr. Adeem Ghaffar Rana

Mr. Ahmad Hassam Khan

Mr. Fahad Ali Rabbani

Mr. Mohsin Pasha

Mr. Saqib Javed

## DEPARTMENT OF CHEMICAL, POLYMER & COMPOSITE MATERIALS ENGINEERING



### • INTRODUCTION

The Department of Chemical, Polymer & Composite Materials Engineering (Kala Shah Kaku campus UET) started its B.Sc. Degree program in 2007. Since then, the department has developed considerably in terms of labs and research facilities, opening new ways of interaction with different industries. Engineers use specialist scientific knowledge, analysis and innovative thinking to come up with creative solutions to real-world problems. They design new chemical processes and products, as well as improving the performance of existing ones. They are also involved in developing cleaner and more sustainable energy sources, and developing new wonder-drugs to cure the world's diseases. Core strengths of department are its qualified and dedicated faculty; up-to-date laboratories with essential equipment; well-equipped and upgraded library; strong Industrial links and well-equipped research

labs.

### COURSES OF STUDY

The degree programs at Department of Chemical, Polymer and Composite Materials Engineering cover all aspects of knowledge, skills and industrial motives to enable graduates with strong technical education for rapidly changing technological environment to pursue lifelong learning and to achieve professional success.

The department offers undergraduate courses of study leading to the following degrees:

- B.Sc. Chemical Engineering
- B.S. Chemical Engineering Technology

### 1. CHEMICAL ENGINEERING

The Department of Chemical, Polymer & Composite Materials Engineering at KSK Campus was designed to build on current acclivities and to provide a nucleus for the University's rapidly expanding industrially oriented research training and consultancy in Chemical Engineering. The curriculum for the B.Sc. Chemical Engineering has evolved over a number of years and is designed to prepare the students for design, operation, and supervision of Chemical, Biochemical and Polymer

Plants. The course is updated regularly to incorporate the outcomes of local and global research in the field of Chemical Engineering. Emphasis is given to the use of computers by students in problem solving and design of equipment and plant. The course curriculum is same as already being followed in Chemical Engineering Department, Main Campus.

### 2. CHEMICAL ENGINEERING TECHNOLOGY

Chemical Technologists work in every aspect of chemical process industry; from basic research to hazardous waste management, commercial production monitoring and product quality testing and analysis. Curriculum of the program is designed in such a way that students in final semester work in the industry, government organizations and private laboratories to gain experience by applying knowledge and skills they have gained in first seven semesters.



## KSK CAMPUS

### • LABORATORIES/FACILITIES AT THE DEPARTMENT

The Department has ample resources to meet the requirements to run the programs it offers. In particular, following is the list of laboratories at the Department:

- Mass Transfer
- Fluid Flow
- Process Heat Transfer
- Particle Technology
- Unit Processes
- Computers & Computation
- Chemical Reaction Engineering
- Energy Engineering
- Instrumentation and Control
- Chemical Engineering Thermodynamics
- Environmental Engineering
- Research Lab





## DEPARTMENT OF BASIC SCIENCES & HUMANITIES

### Chairperson

Dr. Aneela Anwar

### Assistant Professor

Dr. Samina Akbar

Dr. Kaleem Abbas Asghar

Dr. Kashif Rehan

Dr. Rashid Muneer

### Lecturer

Muhammad Usman

Ms. Sidra Dar

Ms. Saba Ajmal

Ms. Sonia Ayesha Zafar

### OUR VISION

The Department of Basic Sciences and Humanities is predominantly occupied in establishing the significance of Basic Sciences and Humanities as bedrock for the foundation of learning in realm of Engineering and Technology. The oracles of HEC and PEC in consonance with the doyens of the university agreed on devoting 30 percent of curriculum to these epistemological domains which in turn gave rise to Department of Basic Sciences and Humanities.

With an aim to forge sound roots in modes of rational inquiry and to accouter students with scientific, socio-cultural, aesthetic and oratory convictions the department of Basic Sciences and Humanities at KSK focuses on a comprehensive array of subjects including Applied Chemistry, Applied Mathematics, Applied Physics, Communication



Skills, Islamic and Pakistan Studies

### FACULTY

The department has gamut of highly qualified, experienced and specialized faculty with postgraduate and research degrees from renowned Universities across the globe. This dedicated Faculty keeps themselves abreast of the latest developments in their respective disciplines. The Faculty has regularly been participating in and carrying out seminars and symposia of national and international levels and has carved out a significant niche for themselves in their respective fields.

### LABORATORIES

The department possesses 3 laboratories including Chemistry, Physics and Mathematics labs. These laboratories are equipped with latest equipment to enrich the

learning experience of young minds along with flavor of practical work. These laboratories also render invaluable technical support to the projects undertaken by other departments.

Chemistry Lab: Chemistry labs carry out their functions with the help of Research Lab and Experimental Lab. Chemistry lab consists of advanced and state of art equipments used for chemical characterization of every state of matter. These include:

- Gas chromatograph- mass spectrometer
- Atomic absorption spectrophotometer
- High pressure liquid chromatography
- Fourier transform infrared spectrophotometer
- Galvanostate/potentiostat
- UV/Vis spectrophotometer,
- Colorimeter

## DEPARTMENT OF COMPUTER SCIENCE

### Incharge

Dr. Fahim Gohar Awan

### Lecturer

Mr. Amjad Majeed

Teachers from Main Campus are also engaged in teaching various courses.

### COURSES OF STUDY

The Computer Science Department offers undergraduate courses of study leading to the following degrees:

- B.Sc. Computer Science

### LABORATORIES

- Digital System



# RACHNA COLLEGE OF ENGINEERING & TECHNOLOGY (RCET) GUJRANWALA

Department of Electrical Engineering  
Department of Mechanical Engineering  
Department of Industrial & Manufacturing Engineering  
Department of Computer Science  
Department of Natural Science, Humanities & Islamic Studies





## RACHNA COLLEGE OF ENGINEERING & TECHNOLOGY (RCET) GUJRANWALA

### Principal

Dr. Haroon Farooq

### THE COLLEGE

The College was inaugurated on 15th January 2003; by the then Governor of the Punjab Lt. Gen. (R) Khalid Maqbool. It is located on the left bank of Nokhar Branch Canal about seven kilometers off (East) G.T. Road, between Gakhar and Wazirabad. The area is near to industrial cities of Gujranwala, Sialkot and Gujrat. The campus is spread over an area of 73 acres.

### COLLEGE STATUS

RCET was declared the Constituent College of University of Engineering & Technology, Lahore on 22-12-2006. Same rules & regularizations, regarding

admission, examination, award of degree etc. as adopted by UET, Lahore, are followed. The up gradation of RCET to Rachna University of Engineering & Technology was announced on 24-06-2008 on the directions of the then Prime Minister of Islamic Republic of Pakistan.

### PROGRAMS OFFERED

Currently, courses at undergraduate and postgraduate levels are being offered. All B.Sc. Engineering courses are accredited by the Pakistan Engineering Council.

### UNDERGRADUATE

- B.Sc. Electrical Engineering
- B.Sc. Mechanical Engineering
- B.Sc. Industrial & Manufacturing Engineering

## DEPARTMENT OF ELECTRICAL ENGINEERING

### Head of Department

Mr. Adnan Bashir

### Assistant Professors

Mr. Adnan Bashir  
Mr. Muhammad Naveed Akhtar  
Mr. Muhammad Rehan Arif  
Dr. Haroon Farooq  
Dr. Tayyab Mehmood  
Mr. Muhammad Usman Aslam  
Dr. Atta ur Rehman  
Mr. Moazzam Shehzad

### Lecturers

Mr. Waqas Ali  
Mr. Muhammad Usama  
Mr. Irzam Shahid  
Mr. Salman Tariq  
Mr. Abu Bakar Siddique  
Ms. Saira Arif

### Laboratories

The following laboratories have been established at Electrical Engineering Department:

- Electronics
- Microprocessors
- Communications
- Power Electronics
- Electric Circuits
- Computer Networks
- Electric Machines
- Control Systems
- Research/Project
- Workshop

## DEPARTMENT OF MECHANICAL ENGINEERING

### Head of Department

Dr. Hassan Ali

### Assistant Professors

Dr. Hassan Ali  
Mr. Mushtaq Ahmad  
Mr. Nauman Javed  
Mr. Humble Bin Khalid  
Mr. Muhammad Qasim

### Lecturers

Mr. Muhammad Kashif Jamil  
Mr. Aaqib Imdad

### Laboratories

The following laboratories have been setup at Mechanical Engineering Department:

- Energy Resources & Utilization
- Fluid Mechanics / Hydraulic Machinery
- I.C Engines
- Heat Transfer
- H.V.A.C
- Engineering Mechanics
- Mechanics of Materials
- Instrumentation & Control
- Mechanics of Machines
- CAD / FEA
- Mechanical Workshops

- Machines Shop
- Fitting Shop
- Foundry Shop
- Carpentry Shop
- Electrical Shop
- Welding Shop

## DEPARTMENT OF INDUSTRIAL & MANUFACTURING ENGINEERING

### Head of Department

Mr. Muhammad Aslam

### Professor

Dr. M. Yousaf Anwar

### Assistant Professors

Mr. Muhammad Aslam  
Dr. Syed Farhan Raza  
Mr. M. Mohsin Ahmad Sadiq  
Mr. Muhammad Shahzad  
Mr. Muhammad Awais Ahmad

### Lecturers

Ms. Quratulain Rasheed  
Mr. Mansoor-UI-Hassan

### Laboratories

The following laboratories have been setup at Industrial & Manufacturing Engineering Department:

- Machine Tools and Machining
- Industrial Materials
- Manufacturing Processes

- Metrology and Quality Assurance
- Production and Operations Management Plant Engineering
- Engineering Drawing
- Instrumentation and Control

## DEPARTMENT OF COMPUTER SCIENCE

### Head of Department

Mr. Shahid Islam

### Assistant Professors

Mr. Shahid Islam

Mr. Abdul Jaleel

Ms. Tayybah Kiren

### Lecturers

Mr. Noman Sohaib Qureshi

Ms. Amna Wajid

Mr. Zaheer Abbas

Mr. Muhammad Shehzad Aslam

Ms. Nadia Yousaf

Ms. Asthma Fardoos

Lab. Supervisor / IT Administrator

Mr. Kamran Rashid Khan

### Laboratories

- Programming
- Systems
- Hardware

## DEPARTMENT OF NATURAL SCIENCE, HUMANITIES & ISLAMIC STUDIES

### Head of Department

Dr. Majid Hussain

### Assistant Professors

Dr. Majid Hussain

Dr. Adnan Aslam

Dr. Syed Mazhar Shah

Dr. Atta-ur-Rehman Makhdoom

Mr. Liaquat Ali Tahir

Mr. Mateen Ahmad

Mr. Muhammad Abdullah

### Lecturers

Ms. Saira Zahid

## COMMON FACILITIES

### IT Facilities

RCET provides state-of-the-art on campus computer laboratory to cater the students' need for research and simulation facilities. In addition, high speed internet facility is provided to enable the students' access to international research journals.

### Library

There is a state-of-the-art central library in the College premises. It has more than 6000 books of various disciplines. The college also has access to the digital library (having more than 25,000 eBooks) being maintained by UET, Lahore. Moreover, Information Resource Lab, equipped with various

computers and Internet facility, is established in the library. Moreover, building of new central library is under construction with an amount of Rs. 30 million.





## COMMON FACILITIES

### Accommodations

On-campus housing provides students with a community environment while they pursue their studies. RCET offers accommodation to students in the form of five hostels with the capacity of 350 students. The female students are accommodated through separate hostel. A new hostel for 100 students is under construction on newly acquired land. Internet facility is also provided to all the hostels.

**Hostel:** Transport



Transport is provided to day-scholars from Gujranwala to the college and back to Gujranwala. Boarders also enjoy the facility twice a week for shopping and recreational tours.

### Medical Centre

A centralized medical center having all necessary medicines is being managed by the Doctor who is on the roll of the College and is available round the clock.

### Mosque

The College has spacious, beautiful and well-furnished mosque, which can accommodate available strength

at Campus for prayers.

### Cafeteria and Canteen

A reasonably spacious cafeteria with lawns is available to the students, where food, cold drinks, tea and other utility items are available at the market rates. Moreover, a sizeable canteen and two fruit shops to meet the requirements of students and staff members at the campus exists at the College.

### Sports

The College, along with the academic activities, lays proper emphasis on sports and games. The College, currently, possesses the following sports facilities:

• Badminton Courts	02
• Basket Ball Court	01
• Foot Ball Ground	01
• Volley Ball Court	01
• Cricket Ground	01

• Gymnasium	01
• Table Tennis	01

### Societies

Currently the following societies are organizing different events, seminars and workshops to enhance mental, physical, creative, literary and dramatic skills of the students to meet different challenges in their professional careers.

- Cultural, Dramatic and Entertainment Society
- Literary and Debating Society
- Blood Donating Society
- Rachna Students Support Society
- Society of Electrical Engineering Department
- Institute of Electrical & Electronics Engineers, RCET Chapter
- American Society of Mechanical Engineering, RCET Chapter
- Society of Industrial and Manufacturing Engineering



**Campus Coordinator**  
Professor Dr. Muhammad Kamran

University of Engineering and Technology, Lahore has established a sub-campus with the aim of producing quality technical manpower and to bring forward the backward district Narowal and its surrounding areas. In 2012, undergraduate programs: BSc Electrical and Mechanical Engineering were started in the Post Graduate Block of Govt Islamia Degree College Narowal. A third undergraduate program: BSc Civil Engineering was started in 2013. Undergraduate program in Computer Science was started last year. Civil Engineering Technology program is being introduced this year. Additional programs will also be introduced later on. Punjab Government has given 200 acres of land and the Campus is under construction at about 15 km distance from Narowal along Narowal-Muridke road.

**DEPARTMENT OF ELECTRICAL  
ENGINEERING**

**Professor**  
Dr. Muhammad Kamran

**Assistant Professor**  
Dr. Farooq Ahmad  
Dr. Rana Tariq Mehmood Ahmad  
Dr Muhammad Ilyas

**Lecturers**  
Ms. Nasim Zahra  
Ms. Noor ul Ain Mir  
Mr. Shahbaz Bashir  
Mr. Aqib Nasim  
Ms. Amna Javeed  
Mr. Ahsan Ghauri  
Mr. Osama Bin Naeem  
Ms. Asia Rafiq  
Mr. Bilal Ahmed

Department of Computer Science  
Department of Basic Science &  
Humanities

**DEPARTMENT OF MECHANICAL  
ENGINEERING**

**Professor**  
Dr. Younis Jamal

**Assistant Professor**  
Dr. Anees ur Rehman

**Lecturer**  
Mr. Shahid Farooq  
Mr. Tanveer Mukhtar  
Mr. Nazim Waheed  
Mr. Muhammad Lolak  
Mr. Ussama Ali  
Mr. Sufyan Matloob  
Mr. Asif Jalal  
Mr. Umar Ishaq  
Mr. Atif Mehmood

## NAROWAL CAMPUS

### DEPARTMENT OF CIVIL ENGINEERING

#### Professor

Dr. Aziz Akbar

#### Assistant Professors

Dr. Muhammad Waseem

Dr. Ijaz Ahmed

#### Lecturers

Mr. Muhammad Tahir

Mr. Shafqat Mehboob

Mr. Muhammad Shahid

Mr. Muhammad Mohsin

Mr. Adeel Faisal

Ms. Sehrish Khan

Mr. Intezar Hussain

Mr. Abdul Rahim Khan

Mr. Nouman Iqbal

Mr. Muhammad Shoib Karm

### DEPARTMENT OF COMPUTER SCIENCE

#### Assistant Professor

Dr. Muhammad Idrees

#### Lecturers

Mr. Asim Naveed

Mr. Yaseen ul Haq

Ms. Iqra Munir

### DEPARTMENT OF BASIC SCIENCES & HUMANITIES

#### Assistant Professor

Dr. Muhammad Amin Abid

Dr. Abdul Gaffar

Dr. Muhammad Yousaf

#### Lecturer

Mr. Muhammad Zeeshan Ashraf

Ms. Anjum Nasim Rao

#### Lecturer

Mr. Muhammad Zeeshan Ashraf

Ms. Anjum Nasim Rao

Ms. Tayyeba Akram (Computer Science) (visiting) (Lecturer)





# INSTITUTES & ADMINISTRATIVE DEPARTMENTS

Al Khawarizmi Institute of Computer Science  
Office of Research, Innovation and Commercialization  
Students Financial & Career Services Office  
University advancement & External Linkages Office  
Students Tutorial & Guidance Bureau  
Directorate of Studies  
National Library of Engineering Sciences  
Software Engineering Center  
Advisory Services for Foreign Students

University Pictorial Board  
Repair & Maintenance Center  
Directorate of Student Affairs  
Directorate of Sports  
Transport Section  
Halls of Residences  
Student Section  
Health Clinic  
University Day Care Center



## AL-KHAWARIZMI INSTITUTE OF COMPUTER SCIENCES



Al-Khawarizmi Institute of Computer Science works with a crystal-clear objective of establishing itself as an authenticated and efficient research and development organization that explores way-out technologies in collaboration with national and international research institutes and industries. The institute has completed/ initiated more than 100 R&D projects since its inception with national and international funding.

**Aims and Objectives of the Institute**  
Following are the main aims and objectives of the institute:  
Take a fast track in becoming premier research and advanced

technology organization.  
Become a center recognized for technology innovation and industrial collaboration.  
Become a leading resource of research and development in critical areas of National interest.  
Play a key role in taking the country towards knowledge-based economy and competitive industrialization.  
Provide the country with trained resources for development of high tech products and services.  
Exercise commercialization through Incubation of high tech companies.

Meet an acute shortage of well qualified researchers of IT which is frustrating Pakistan's plans to break into the lucrative international software markets.

Meet a dire shortage of adequate quality applied research capability in computer related sciences in Pakistan. Make world class technology available to undertake large and complex IT Projects in Pakistan.

Creating national self-sufficiency, especially in the public sector, by addressing IT problems unique to Pakistan.

### RESEARCH LABS

Currently the following Research Labs are operating at the Institute:

#### **1. High Performance Computing and Networking Lab (HPCNL)**

Research focus of HPCNL is parallel and distributed computing, virtualization, cloud computing, big data analytics, performance evaluation and characterization of high speed networks and multi-core systems.

#### **2. Software Systems Research Lab (SSRL)**

SSRL is engaged in Software Development, Customization of open source software, Enterprise level systems and web based solutions, Mobile application development and trainings, Location based services and network parametric analysis.



## AL-KHAWARIZMI INSTITUTE OF COMPUTER SCIENCES

### 3. Bioinformatics Research Lab (BRL)

BRL is involved in development of next generation chemical and biological databases and front end, electronic notepad development for chemical experimentation.

### 4. Mobile Game Development Lab (MGDL)

Mobile Lab is involved in development and design of mobile game for entertainment and edutainment. The lab has released some games on Google Play Store and Apple App Store.

### 5. Computer Vision and Machine Learning (CVML) Lab

CVML Lab focuses on the research and development of image processing tools, computer vision algorithms, natural language processing and applications helpful to community from the field of computer vision. The lab is involved in the development of core APIs required for the surveillance systems including face recognition, emotions and actions recognition and scene settings.

### 6. Wireless Systems Research Lab (WSRL)

WSL is involved in research and development of advanced signal processing algorithms for next generation wireless networks including 5G systems.

Simultaneous wireless information and power transfer (SWIPT) is a promising technique to overcome the limitations of traditional methods of energy harvesting.

### 7. Mentor Graphics Embedded Systems Lab (MESL)

Embedded Systems Lab funded by Mentor Graphics focuses on providing hands-on experience to the students with programming, testing and debugging of ARM based microprocessors and equip them with the ability to design and implement the embedded hardware/software systems.

### 8. Next-Genera Wireless Sensors Network Research Lab (NWSNL)

The NWN Lab is involved in research and development of distributed wireless sensor networks. The lab develops the solutions for intelligent security; environment monitoring and energy efficient event triggered wireless sensor networks.

### 9. Enterprise Software Solutions Lab (ESSL)

ESSL focuses on automation of power industry in Pakistan, Smart Grid development, Monitoring of generation, demand and distribution aspect of power grid.

### 10. Internet of Things (IoT) Lab

The Lab is involved in design & development of small energy

efficient platforms to enable Internet connectivity to everyday things. Currently, focus is on Internet of Multimedia Things (IoMT).

### 11. Radio Frequency Research Lab (RFRL)

RF Lab is meant to be a training facility for developing radio related design and circuitry, in addition it is affiliated with industries in developing Radio Communication devices.

### 12. Center for System Simulation & Visual Analytics Research (CSVAR)

The primary area of focus of the center is data analysis and visualization using desktop applications, web forms or smartphone applications. Development ranges from Web-Development in scripting languages such as PHP to Desktop Applications using structured languages such as Java, C, C++ and C#.

### 13. Alternate Energy Research and Innovation Lab (AERIL)

AERIL focuses on research ideas and development related to renewable technologies such as solar energy, wind energy, biomass, energy efficiency, testing, surveillance and remote monitoring etc as well as development of energy efficient home and office appliances.



## AL-KHAWARIZMI INSTITUTE OF COMPUTER SCIENCES

### 314. Industrial Automation and Control Lab (IACL)

IACL focuses on developing industry Academia linkage. The lab executes projects on turnkey basis, provides consultancy, Performs research work on new technologies developed locally, the solutions cover design integration of Instruments, Electrical and Supervisory Control and Data Acquisition(SCADA) systems.

### 15. Energy Efficiency and Conservation Lab (EECL)

EECL focuses on developing industry Academia linkage with energy conservation key concept in mind. It's important to appreciate the fact that Energy conservation is more important than Energy generation.

### 16. Technology Incubation Center (TIC)

TIC believes in changing the national and individual fortune by familiarizing and exposing students to the Entrepreneurial Ventures and Startup Culture. We do this by providing students with the required infrastructure, office space, mentoring and consultancy to nourish their ideas from infant seed stage to the flourished high growth venture.

### 17. University Management System (UMS) Lab

This lab is responsible for development, implementation and support services of ERP and Non

ERP solutions in UET Lahore, its all campuses affiliated colleges / institutes. This covers the Admission, Campus, Learning Management System enabled with Outcome Based Education (OBE) and other non academic modules which includes Finance, Student Dues and HRM.

### 18. Pearson VUE Testing Center

Pearson is an International Testing Facility for CISCO, Microsoft, Royal College of Physicians, Saudi Commission for Health Specialists, GMAT, ORACLE, Institute of Internal Audit and Others

### ADVANCED TECHNOLOGY CENTERS (ATCS)

#### 1. Center for Language Engineering (CLE)

CLE aims to create opportunities for local populations to access information and communicate in their local languages, to enable them to use Information and Communication Technology maximally for their socio-economic benefit. Center for Language Engineering (CLE) is conducting research and development in linguistic and computational aspects of languages, specifically of Pakistan and developing Asia.

#### 2. Huawei UET Telecom and IT Center (HUTIC)

The center provides trainings on various nodes GSM technology including 2.75G EDGE Technology to

students and professionals from all over the country. It also provides trainings in datacom. The center became self-sustained over a period of three years. Pearson testing center is established for international certification.

### WORKFORCE

Current total HR strength of the institute is more than 200 including research and administrative staff. The research staff includes around 25 Ph.D. faculty, 30 MS, 60 BS and 50 interns.

### National & International Collaborations

KICS has signed agreements with nearly 100 national and international research and academic organization and industry for mutual R & D collaborations. Prominent names include CISCO, Amazon, Warid Tel, Oxford Dictionary, Mentor Graphics, Pearson VUE, Microsoft, World Bank, NOKIA, WAPDA, Huawei and many more.



## AL-KHAWARIZMI INSTITUTE OF COMPUTER SCIENCES

Governing Bodies:

The following are the main governing bodies of the Institute

Sr.	Name	Position
<b>1)Board of Governors</b>		
The Board comprises of the following:		
1.	Prof. Dr. Fazal Ahmad Khalid, Vice -Chancellor, UET, Lahore	Chairman
2.	Prof. Dr. Naveed A. Malik, Rector, Virtual University	Member
3.	Prof. Dr. K. E Durrani, Ex. Dean EE, UET, Lahore.	Member
4.	Secretary Education, Govt. of the Punjab or his/her Nominee	Member
5.	Secretary Finance, Govt. of the Punjab or his/her Nominee	Member
6.	Prof. Dr. Waqar Mahmood, Director KICS	Convener
<b>2)Management Committee</b>		
The Management Committee comprises of the following:		
Sr.	Name	Position
1.	Prof. Dr. Waqar Mahmood, Director, KICS, UET, Lahore	Convener
2.	Prof. Naveed A. Malik, Rector, Virtual University	Member
3.	Prof. Dr. Fakhar Lodhi, Prof. GIFT University, Gujranwala	Member
4.	Dr. Shafay Shumail, Associate Professor, LUMS	Member



## OFFICE OF RESEARCH INNOVATION & COMMERCIALIZATION (ORIC)

### Director

Prof. Dr. Muhammad Tahir

ORIC performs a variety of functions to promote research, extension and advisory services in the University. These include:

- Regulate M.Sc., M.Phil., and Ph.D. programs
- Provide funds for M.Sc., M.Phil. and Ph.D. Research
- Co-ordinate the split Ph.D. program with foreign universities.
- Sponsoring collaborative research work in Engineering and Architecture, City & Regional Planning and allied disciplines at the University and promote the research work
- Coordinating advisory services of the university for the benefit of the government departments and industries
- Arranging evaluation of research publications of faculty members and publishing of Research Journal of the University
- Provide funds and monitor faculty research
- Approve, thesis titles, supervisors and examiners
- Award of Research Assistantship

### RESEARCH CENTRE

Research is an essential element of higher education. To realize this objective, soon after its establishment in 1961, the

University set up a Directorate to organize and promote Research and Advisory Services. However, the phenomenal increase in the number of students at the undergraduate level, so over-whelmed the University that the development of research lagged behind considerably.

To arrest this situation, an effort was made in 1986 to establish an Advanced Research Centre, but unfortunately it could not take off, due to lack of financial support by the Government. However, in 1998-99 it was decided to set up a Research Centre at the University from its own resources to start with. An adequate space has been allocated for the Centre out of the existing academic blocks. Necessary equipment and machinery is also being arranged for the Centre from various sources. A faculty unmatched in caliber is already available in the University, which can conduct and guide research in the fields of vital importance for the economic development of the country. In addition, full-time research assistants have been registered for postgraduate research and M.Sc. studies on a stipend. The researchwork will mainly focus on solving the



problems faced by the Industry and private entrepreneur.

The following laboratories are functioning in the Research Centre:

- Product Research
- Advanced electronics
- Communication systems
- Advanced Engineering Materials
- IT Research
- Advance Physics
- High Tech Centralized Resource
- Computer Cell
- It is proposed that the following laboratories shall be established during the second phase:
- Automotive System and Energy conservation Laboratory
- Chemical engineering
- Indigenization Laboratory

In addition, the Center shall have the following two sections:

- Project Appraisal and Management Section
- Total Quality Management Section



## INSTITUTES & ADMINISTRATIVE DEPARTMENTS

### STUDENTS' FINANCIAL AID & CAREER SERVICES OFFICE

#### Director

Prof. Dr. Naseem Aadil Siddiqui

One of the important functions is to search and develop contacts with the industry and R&D institutes in public and private sectors of the country in order to identify prospective employers, jobs, scholarships and internship training for UET students.

This office acts as a bridge between UET graduates and employers and donor agencies for scholarships, financial assistance, loans etc. The office is committed

to provide friendly and efficient services to UET students, graduates, employers and scholarship donor agencies. It provides information to the students with the recent jobs and scholarships available by displaying the information on the UET notice board frequently. Students get to know the different areas where they can grow as engineers and enhance their natural and technical skill which they developed during their stay as students in the University. It frequently arranges visits of the Prospective employers and their

discussions with faculty members and students of relevant departments regarding the emerging need and training of the students in the same direction. The 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 office maintains a mailing list of major companies employing engineers who are constantly informed about the graduating classes at proper time.

### DIRECTORATE OF STUDIES

#### Director

Prof. Dr. Ghulam Abbas Anjum

The directorate has the following responsibilities:

- To organize undergraduate teaching in different departments of the University.
- To monitor the progress of the teaching during the academic session and to prepare comprehensive report for administration.
- To function as a liaison office between the departments for the smooth conduct of the courses.
- To coordinate academic activities of departments and to ensure the timely completion of courses by respective departments.

- To provide facilities to the students through their class representatives to solve their personal problems.



## INSTITUTES & ADMINISTRATIVE DEPARTMENTS

### UNIVERSITY ADVANCEMENT & EXTERNAL LINKAGE OFFICE

#### Director

Prof. Dr. Muhammad Tahir

The office undertakes the tasks of industrial liaison, international linkages, in-country cooperation and liaison with alumni. The scopes of these activities are development of mutual understanding, promotion of collaborative projects, research, facilitation for jobs, higher studies, short term training and other interests. The University has signed the following MoUs of mutual cooperation:

- Saadullah Khan & Brothers, Lahore
- Synthetic Products Enterprises (Pvt.) Ltd., Lahore
- M/s Huawei (Pvt) Limited, Islamabad
- Oil and Gas Development Company Limited (OGDCL), Islamabad
- chlumberger Seaco Inc. (SLB)
- Lahore Chamber of Commerce & Industry, Lahore
- Sui Northern Gas Pipe Line (Pvt) Ltd. (SNGPL)
- Alternate Energy Development Board, Islamabad
- Chartered Institute of Logistics and Transport (CILT),
- All Pakistan Textile Mills Association (APTMA) & Small & Medium Enterprises Development Authority (SMEDA)
- China Mobile Pakistan (Zong) Limited.
- Govt. College University (GCU), Lahore
- ZTE Corporation, China

Similarly, cooperation is being promoted on international forum and the graduates of this university are really accepted for higher studies and research all over the world. MoUs have been signed with the following Universities/organizations:

- Brandenburg Technology University (BTU), Brandenburg, Germany
- Anhalt University of Applied Sciences in Bernburg /Dessau/Kothen, Germany
- Wuerzburg-Schweinfurt University of Applied



Science, Germany

- Michigan Technology University, USA
- University of South Carolina, USA
- Michigan State University, USA
- Queen Mary University of London, U.K.
- University of Bedfordshire, U.K
- University of Manchester Institute of Science and Technology (UMIST), U.K.
- University of Manchester (Faculty of Engineering & Physical Sciences), U.K.
- University of Northumbria at Newcastle, U.K.
- University of Glamorgan, U.K.
- HONAM University, Korea
- University of Regina, Canada
- Nanjig University China, China
- Asian Institute of Technology, Bangkok, Thailand
- University of Kebangsaan Malaysia (UKM), Malaysia
- The University of Aden, Yemen, Yemen
- Arab Circle Renewable Energy, Jeddah, Saudi Arabia

UET Alumni Association is functioning under the patronship of the Vice-Chancellor. The Association has chapters in USA, Canada, Middle East & Europe. The Directorate is facilitating the association in pursuing their activities and contributions to support the University with new vigor.

## NATIONAL LIBRARY OF ENGINEERING SCIENCES



The Central Library of the University has the honour of having been chosen by the Higher Education Commission to serve as the primary resource center for engineering and technical education in Pakistan. As such, it has significantly improved its book holding and it is going through an ambitious program of computerization of its services and operation. Housed in a dedicated three-storey structure, the Library offers peaceful, air-conditioned atmosphere for its members. It is a lending library, and most of its holdings are available to members on loan. The Library holdings can be browsed through an Internet based fully searchable catalogue.

### HARDCOPY RESOURCES

The Library houses more than 1,10,000 (including Book Bank), over

22,000 volumes of bound serials, and roughly 600 issues of scientific and technical serials. The balance of these library holdings is somewhat tilted towards engineering and technical subjects. However, there is a reasonable amount of reading material on humanities, Basic Sciences, Social Sciences and Islamic Studies as well, and as a matter of policy the Library is committed to improve the diversity of its holdings.

**Internet and Computing Facilities**  
As the primary resource center of a technical university, the Library is also committed to provide access to electronic media and Internet to its members. At present, the library offers over 60 computers with high-speed dedicated Internet access for use of its members. These computers also provide a dedicated link to HEC

Digital Library, Ebrary, McGraw hill Digital Engineering Library, etc. that provide access to over 18000 e-journals spanning all fields of academic endeavor. There are also active plans to develop a Soft Library to support ongoing research within UET.

### OTHER FACILITIES

The Library also has additional facilities to support scholarly activities within its premises. These include a well-equipped Seminar Hall, Conference Room and necessary support services. Other library services include subsidized Scanning, Printing, Photocopying and Binding. The library also operates a Book bank which lends textbooks to students for a complete academic session on nominal rent.

### CURRENT PROJECTS

The Library is in a process of integration with various departmental Libraries on the Lahore Campus. This shall result in a Library System where all Library resources on the campus shall be accessible to all members in a seamless way. Later on Libraries of other UET Campuses shall also be included in this System. Other developments projects include an RFID based automated and secure Library management System and development of a digital archive of the library.



URL : <http://library.uet.edu.pk>



## SOFTWARE ENGINEERING CENTER



### Director

Prof. Dr. Muhammad Shahbaz

Software Engineering Center was inaugurated on 17 May 1999, by the then Prime Minister of Islamic Republic of Pakistan, as Information Technology (I.T.) Center. Later on it was renamed as Software Engineering Center. It houses four computer laboratories equipped with more than 200 computers, each of which is connected to Internet via high bandwidth medium. Only one laboratory hosts licensed Windows Operating system and the remaining host Open Source Linux operating system. It also houses an Electronics Laboratory.

It is primarily used for conducting

B.Sc. laboratories, postgraduate classes and postgraduate research. Currently, following research groups are operating in its premises each

headed by a senior faculty member:

- \* Bio-Informatics
- \* Information Retrieval
- \* Semantic Web Engineering
- \* Machine Learning
- \* Data Mining and Data Warehousing
- \* Wireless Sensor Networks
- \* Image and Speech Processing

Besides faculty offices, it also houses a Seminar Hall with a seating capacity of 185 and a lecture theater with a seating capacity of 100. All

workshops, seminars, exhibitions and competitions are arranged in this Center.

Library management System and development of a digital archive of



## INSTITUTES & ADMINISTRATIVE DEPARTMENTS

### UNIVERSITY WORKSHOPS

#### Incharge

Mr. Shahid Mahmood Chughtai

The University Mechanical Engineering Workshops were established in 1937 and were designed to provide know-how with hands-on practical training in Workshop Technology to the engineering students. A package practical course, titled "Workshop Practice" is offered to all first year undergraduate students of all the (different) Engineering/non Engineering disciplines from Main and other allied campuses. The course has been skillfully planned to impart practical training supported by relevant theoretical knowledge in the field of fabrication and production. As an outcome, the students are enabled to acquire ample expertise by going through

practical assignments in handling tools and plants. The students are also assigned small projects for accomplishing their task efficiently and successfully. The course offered inculcate self-confidence in the students, for their success in future career. Now a days students are visiting four labs / shops i.e.

- i. Basic Machine Shop**
- ii. Fitting & Fabrication Shop**
- iii. Wood Work lab**
- iv. Basic Electrical lab**

The Workshops also offer guidance to final years students in the fabrication of their projects, cater for research needs in of teaching department and manufacture equipment according to their requirements.

### INTERNATIONAL STUDENTS OFFICE

#### Advisor

Prof. Dr. Muhammad Saleem Khan

The University had established Advisory Services for Foreign Students in addition to the Directorate of Students Affairs. There are Foreign Students from more than 15 countries. The Advisor's Role is to provide them guidance in their academic matters and also organize Sociocultural functions on important occasions with help of the students. These functions include celebration of the Independence Day of Pakistan, Eidul- Fitr and Eid-ul- Dhoha, etc. The students can also organize celebrations of the National festivals of their own countries with permission of the university authorities through the Advisor



## INSTITUTES & ADMINISTRATIVE DEPARTMENTS

### UNIVERSITY PROCTORIAL BOARD

#### Chairman

Prof. Dr. Muhammad Shoaib

The Proctorial Board has been functioning for the last many years. The Proctorial Board comprises of a Chairman as well as about 16 Teacher Proctors selected from the teachers of various departments/disciplines of the University. The Proctorial Board believes to implement the merit based culture in the university, the vision of the Vice Chancellor. Therefore, so the most essential part of the Board is Students' Class Representatives (CRs) and Students' Proctors and they are the first and second position holders in their previous Examinations, respectively, in each section/class. After declaration of the result of every examination of the university new CRs and Student Proctors are notified. Thus, a healthy academic competition continues among the students. They are from each section/class of every discipline of the University.

The role of the Proctorial Board includes:

1. To provide assistance to students in the enhancement their academic and extracurricular activities.
2. To maintain the discipline at the campus and provision of academic guidance to the students.
3. To conduct the seminars and workshops in order to improve the soft skills of the students.



### STUDENTS TUTORIAL & GUIDANCE BUREAU

#### Assistant Councilor

Ms. Tayyiba Mushtaq

The University is concerned not only with imparting knowledge and skills but also with the overall development of the students. The aim is to produce young engineers who have stable and harmonious

personalities, and are well-adjusted with their surroundings. The Bureau assists in the realization of these objectives. It offers counseling services to students who may have any psycho-social problems or face any difficulty in coping with their academic roles and responsibilities. To play its role effectively, the Bureau endeavors to maintain students' physical, psychological and personal data. Such data helps the councillors in making their services more useful and effective.



## INSTITUTES & ADMINISTRATIVE DEPARTMENTS

### REPAIR & MAINTENANCE CENTER

#### Director

Prof. Dr. Muhammad Pervez Mughal

Ever since the establishment of various laboratories in the University of Engineering and Technology, need for providing back-up repair and maintenance support has always been felt. A serious effort was made in this regard in 1995 when the matter was taken up with the Government to set up a center for Repair and Maintenance of Scientific Instrument. However, the project could not materialize for want of financial allocation. The furnishing of University laboratories with modern sophisticated equipment through Japanese assistance once again necessitated the setting up of a Repair and Maintenance Center. This facility started with University own resources and was upgraded through HEC funded project.

The Repair and Maintenance Center consists of three sections:

- a) Electrical and Electronic Instruments/equipment repair

### DIRECTORATE OF STUDENTS AFFAIRS

#### Director

Prof. Dr Asif Ali Qaiser

The primary function of the directorate is to organize extra-curricular activities of the students and to foster their intellectual, literary and artistic potential, which remains untapped in the classroom. It functions normally through a large number of clubs and societies, each devoted to some sport or cultural and

- b) Microprocessor based instruments/equipment repair
- c) Mechanical, hydraulic and pneumatic devices repair

The functions of the Center include:

- a) Routine maintenance and calibration of laboratory equipment and instruments.
- b) Repair of electronic, electrical mechanical, hydraulic, pneumatic and microprocessor based equipment.
- c) Repair and Maintenance services to non-laboratory equipment.

The center has its own director who is guided by a Management Board headed by the Vice Chancellor. Each section has trained staff for repair/maintenance.



artistic activity. The students join these clubs and societies according to their inclinations and aptitudes. Another function of the directorate is to main 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 dignified and disciplined behavior, which behaves a University student and a prospective member of the honored community of engineers, architects, planners and scientists.

## INSTITUTES & ADMINISTRATIVE DEPARTMENTS

### DIRECTORATE OF SPORTS

#### Chairman Sports Committee

Prof. Dr. Nadeem Feroze

#### Director Physical Education

Mr. Muhammad Tanveer

The University provides ample facilities to the students for participation in games and sports, both outdoors and indoors. Facilities are provided for all

the Major sports including cricket, Hockey, Football, tennis, badminton, basketball, squash, table tennis, Body Building and athletics. A series of inter faculty and inter hostel tournaments are held to provide participation to maximum number of students in inter-universities tournaments under Higher Education Commission.

The sports complex is a commanding feature of the campus landscape and has, amongst other things, an Olympic-size swimming pool, tennis and squash



## INSTITUTES & ADMINISTRATIVE DEPARTMENTS



### TRANSPORT SECTION

#### Chairman Transport Committee

Prof. Dr. Ijaz Ahmad

A large fleet of buses is maintained by the University. Transport facility is provided to day-scholars as well as hostel students against nominal charges. The buses for day-scholars ply on different routes within the Lahore Municipal Corporation limits. The detail of different pick and drop points is available with the Transport Section (Phone No: 9029466) Evening shopping routes are arranged for hostel students.

### HALLS OF RESIDENCES

The Senior Warden's Office is housed in the Administration Block. The University has ample provisions for hostel accommodation. It has fourteen halls of residence for boys that accommodate about 2800 students. The three halls (Al-Zohra, Khadeeja and Ayesha) are for girls students having accommodation of 450 students. The Halls reflect history of the institution through variations in the architectural styles over the last three quarter of a century. Some of the halls are of the pre independence period, inherited from the former Maclagan College of Engineering whereas others were built over a period of half a century since the time of the institution received its Charter as a University in 1961. For the overall management, all halls are supervised by the Senior Warden along with a male and female warden. However, each hall is looked after directly by a

Resident Tutor. Many aspects of halls are managed by the students themselves such as the boarding arrangements. The Halls are provided with common rooms, mess, study room, canteens, prayer room, Internet and other common utilities. The students are required to abide by the rules and regulation governing residence in the University halls and are encouraged to develop community life conducive to healthy growth of the social aspect of their personalities.

The names of the halls of residence and phone numbers are as follows:

- |                            |          |
|----------------------------|----------|
| 1. Al-Zohra Hall           | 99250242 |
| 2. Khadeeja Hall           | 99029244 |
| 3. Ayesha Hall             | 99029291 |
| 4. Ali Mardan Hall         | 99250244 |
| 5. Allama Iqbal Hall       | 99250236 |
| 6. Liaqat Hall             | 99250235 |
| 7. Mahmood Ghaznavi Hall   | 99250231 |
| 8. Muhammad Bin Qasim Hall | 99250239 |
| 9. Mumtaz Hall             | 99250238 |
| 10. Quaid-e-Azam Hall      | 99250243 |
| 11. Sir Syed hall          | 99250237 |
| 12. Umer Hall              | 99250233 |
| 13. Usman Hall             | 99250233 |
| 14. Zubair Hall            | 99250240 |
| 15. Abdul Sattar Edhi Hall |          |





## INSTITUTES & ADMINISTRATIVE DEPARTMENTS

### STUDENTS SECTION

Incharge Students Section  
Prof. Dr. Mohammad Ali Maud

This Section is located on the ground floor of Administration block and it deals with all matters relating to admission at undergraduate and postgraduate levels. Registration of new students, issuance of provisional certificates, verification of documents and issuance Objection Certificates is also dealt with at this section.



### HEALTH CLINIC

Chairman Health Committee  
Prof. Dr. Khalid Mahmood ul Hasan

Chief Medical Officer  
Dr. Muhammad Shahzad

The University provides medical cover to its employees and students under the supervision of a health Committee. On the request of a Resident Tutor, the Doctor may visit a patient in hostel if he is unable to move from bed.

The students are supposed to cooperate with the

medical officer in maintaining record of their illnesses to enable him to issue medical certificates, when needed. The day-scholars can have their medical certificates countersigned from the University Medical Officer if they are treated by an outside registered medical practitioner. Medicines, however, are not issued from the clinic on prescription of an outside medical practitioner.

### UNIVERSITY DAY CARE CENTER

Director  
Prof. Dr. Rehana Sharif

The University Day Care Center has been established recently by the Worthy Vice Chancellor. The major objective of the day care center is to facilitate the female teachers and officers of the university. The kids of teachers and officers of the university are enrolled at the day care center and looked after by the educated staff of the day care center in future the classes of Montessori at the university day care center will be started.

The day care center is being administrator by a committee consists of teachers and officers of the university under the Convener. The day care center also provides a good opportunity for doing the social service.



# RULES & REGULATIONS



# **IMPORTANT** *Information*

## **1. Definitions**

- a) "University" means the University of Engineering and Technology, Lahore
- b) "College" means the Constituent/ Affiliated College of the University
- c) "Faculty" means the concerned faculty of the University
- d) "Vice-Chancellor" means the Vice-Chancellor of the University
- e) "Pro Vice-Chancellor" means the Pro Vice-Chancellor of the University
- f) "Dean" means the Dean of the concerned faculty
- g) "Principal" means the Principal of a college
- h) "Chairman" means the Chairman of the concerned department of the University/College
- i) "Controller" means the Controller of Examinations of the University
- j) "Student" means a bonafide student of a degree program of the University who does not maintain admission simultaneously in any other degree/diploma program of the University or in any other Institution
- k) "Candidate" means a student who intends to appear in an examination
- l) "Board of Studies" means the Board of Studies of the concerned discipline of the University/College

## **Explanations**

- 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.

## **2. Modification of Rules and Regulations**

The rule and regulations governing various aspects of students' life at the University (such as discipline,

admissions, examination, migration, fees and charges, etc.) are given in this prospectus 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.

## **3. Special Provisions**

- a) In all cases where the regulations are silent, the decision of the Vice Chancellor shall be final.
- b) Interpretation of these rules and regulations by authorized officers of the University shall be final.
- c) The University authorities reserve the right to make any changes in the existing regulations, rules, fee structure and courses of study that may be considered necessary at any time without prior notice.
- d) No student is allowed to maintain simultaneous enrollment in any other program of studies in the university or any other educational institution within or outside Pakistan, unless permitted by the competent authority as an Exchange Student.
- e) In case a student enrolled in this University is found to be a regular student of some other university/institution whether local or foreign, his admission in this university shall be canceled.
- f) Students are required to know the rules and regulations mentioned in the prospectus and notified time to time. Ignorance of rules and regulations does not absolve them of their responsibilities and shall not be treated as an excuse.

## **4. Liability for Injury, Damage and Loss**

The University teaching programs include training in its workshops and laboratories, places of engineering and architectural 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.



## UG SEMESTER REGULATIONS

### 1.0 Introduction

The following regulations govern the Semester System of teaching and examination for the Undergraduate degrees awarded by University of Engineering and Technology (UET), Lahore.

- a) The Undergraduate degrees offered at the University under Semester System are classified as Bachelor of Science (B.Sc.) and Bachelor. B.Sc. degrees are offered in Engineering disciplines, Technology disciplines, Computer Science and City and Regional Planning. Bachelor's degrees are offered in Architecture, Product and Industrial Design and Business Administration.
- b) Masculine gender used in the following regulations implies male students as well as female students.
- c) The term faculty member or instructor or teacher when mentioned in these regulations would refer to the concerned faculty member or instructor or teacher, if not mentioned as such.
- d) 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 may be either Urdu or English.
- e) The term "Academic Year" refers to the period of study at the University spread over one calendar year period. Academic year is further divided into semesters.
- f) The term "Contact Hour" refers to a 50 minutes period of contact with the students.
- g) The term "Credit Hour (CH)" refers to a unit of academic credit during a semester. Each credit hour is related to a one or more "Contact hours per week" according to subject type and the semester in which it is offered as defined in these regulations.
- h) The term "Pre-requisites" refers to subjects that must be successfully completed prior to registration in a subject requiring these pre-requisites.
- i) The term "Co-requisite" refers to subjects that must be registered simultaneously if studied for the first time. During repetition, simultaneous registration of such subjects is not necessary.
- j) The term "Tutor" refers to a teacher appointed as an advisor and counselor to a group of students and the term "Tutorial" refers to a scheduled session with their tutor.

### 2.0 Degree Duration

- a) The minimum duration of the undergraduate degree programs shall not be less than four academic years in case of Engineering, Engineering Technology, Computer Science, City and Regional Planning, Product and Industrial Design, Business Administration and five academic years in case of Architecture.
- b) The maximum duration of the degree program shall not be more than six academic years for programs with a minimum duration of four academic years and seven academic years for programs with a minimum duration of five academic years.

### 2.1 Extension Beyond Maximum Duration

- a) The Vice Chancellor may grant extensions up to a maximum period of one year beyond the maximum duration for completing requirements for the award of degree. Students requiring extension may apply to the Vice chancellor for this purpose.
- b) A student would be separated from the University if he requires extension beyond one year.
- c) Separated students can apply to the Vice Chancellor for re-admission. If their application is accepted, the concerned department will transfer subjects from the previous registration in accordance with the prescribed rule and assign them to an Entry Session for the purpose of computing their maximum degree duration. They will be allotted new entry session as per the recommendation of the department and new registration number.
- d) A re-admitted student will not be granted second re-admission if he is separated second time from the University.

### 3.0 Student Status

- a) Students shall be classified (1) on the basis of number of credit hours registered in a semester and (2) on the basis of credit hours completed.
- b) The students are classified as per the following nomenclature on the basis of credit hours registered during a semester:
  - i. Students registering in at least 12 credit hours during fall and spring semesters and 6 credit hours during summer semester within the minimum duration of their respective degree program shall be called "Regular".

## UG SEMESTER REGULATIONS

- ii. Students shall be classified as "Casual" students if they register in less than 12 credit hours during fall and spring semesters and less than 6 credit hours during summer semester; Or they register in subjects after completion of their minimum degree duration period.
- c) The students are classified as per the following nomenclature on the basis of credit hours completed:
  - i. "First Year" students if they have successfully completed less than or up to 32 credit hours of prescribed syllabus;
  - ii. "Second Year" students if they have successfully completed more than 32 credit hours but up to 68 credit hours of prescribed syllabus;
  - iii. "Third Year" students if they have successfully completed more than 68 credit hours but up to 104 credit hours of prescribed syllabus;
  - iv. "Fourth Year" students, in case of five years degree program only, if they have successfully completed more than 104 credit hours but up to 136 credit hours of prescribed syllabus
  - v. "Final Year" students if they have successfully completed more than 104 credit hours, in case of a four degree program and more than 136 credit hours, in case of a five years degree program, of prescribed syllabus.

### 4.0 Credit Hours Requirements

The credit hours required for the award of degree may range from a minimum of 130 to a maximum of 136 for degree programs with minimum duration of four academic years and from a minimum of 162 to a maximum of 170 for degree programs with minimum duration of five academic years. These will include a minimum of 6 credit hours of "final year design project" or equivalent spread over two semesters.

### 5.0 Semesters Nomenclature , Duration and Registration Matters

- a) There shall be two regular semesters, namely Fall and Spring semesters, and an optional summer semester during each academic year.
- b) Fall and spring semesters will be spread over 16 to 18 weeks including examinations with at least 15 study weeks during the semester. The duration of summer semester will be 8 weeks including examinations with

weekly contact hours being double from those of fall and spring semesters.

- c) The maximum and minimum permissible number of students to be allowed registration in a subject section will be decided by the concerned Board of Studies.
- d) Students may consult their tutors for registration guidelines.
- e) Registration limits for students are given as under:
  - i. First year and second year students may be allowed to register in at most 18 credit hours during fall and spring semesters such that the contact hours per week do not exceed 26;
  - ii. Students of third year and beyond may be allowed to register in at most 20 credit hours during fall and spring semesters such that the contact hours per week do not exceed 30. Students, because of repetition of subjects or fulfillment of graduation requirements, may apply to the concerned Dean for one credit hour relaxation in the 20 credit hours registration limit
  - iii. At most 8 credit hours during summer semester such that the contact hours per week do not exceed 24.
- f) Registration will only be allowed in a subject if the prerequisites, if any, of this subject have been completed successfully.
- g) Registration in a subject section will be closed if the maximum permitted number of students has registered in it.
- h) A subject section will be closed if less than the minimum numbers of students register in that section. Such students who have been denied registration due to a closure of a section may add some alternate subject(s) during add and drop period.
- i) During summer semester, selected subjects will be offered in accordance with departmental policy for summer semester.

### 6.0 Curriculum and Classification of Subjects

- a) The curriculum, subject identification numbers, the credit hours allocated to each subject and detailed syllabus shall be according to the proposals made by the Board of Studies and the Board of Faculty concerned and approved by the Syndicate on the recommendations of the Academic Council.

## UG SEMESTER REGULATIONS

- a. "Theory" wherein the primary mode of teaching shall be lectures given by teachers supplemented by home assignments. For the purpose of these regulations, subjects of this type shall be referred to as Type-A;
- b. "Practical" wherein the primary mode of teaching shall be experiments, studio laboratory, designs, drawings, assignments and projects conducted/executed by students as specified in the syllabus. For the purpose of these regulations, subjects of this type shall be referred to as Type-B;
- c. "Comprehensive Projects" wherein students engage in design and development of a project under direct supervision of teachers in a laboratory/ studio/ workshop/ industry, spread over one or two regular semesters in an academic year. For the purpose of these regulations, subjects of this type shall be referred to as Type-C.

### 7.0 Type-A Subjects Evaluation and Contact Hours

- a) In Type-A subjects, there shall be a mid-term examination of at least one hour duration and a comprehensive final examination of at least one and a half hour duration. These examinations shall carry 30 and 40 percent weight respectively. The comprehensive final examination will include 20% questions from pre-mid term syllabus. The teacher shall schedule additional assessment instruments such as quizzes, assignments, presentations, seminars, group discussions, field study reports etc. as specified in the syllabus or as determined by the teacher. These assessment instruments shall carry the remaining 30% weight of the subject.
- b) There shall be one contact hour per week during Fall and Spring semesters and two contact hours per week during Summer semester for each credit hour assigned to Type-A subjects.

### 8.0 Type-B Subjects Evaluation and Contact Hours

- a) In Type-B subjects, each Experiment, Studio work, Jury Presentation, Design, Drawing, Project or Assignment shall be considered as an independent assessment instrument. Cumulative performance in all independent assessment instruments shall form the basis for evaluating a student.
- b) There shall be two to three contact hours per week during Fall and Spring semesters and four to six contact

hours per week during Summer semester for each credit hour assigned to Type-B subjects.

### 9.0 Type-C Subjects Evaluation and Contact Hours

- a) In Type-C subjects, each exercise, project or assignment shall be assessed for process during its life time (Continuous Assessment) while the end product shall be assessed, right after its submission, through Viva-Voce /Jury examination (Terminal Assessment).
- b) Continuous Assessment and Terminal Assessment of Type-C subjects may carry 60 and 40 percent weight respectively.
- c) External Examiners/ Jurors shall be involved in the assessment of all Type-C subjects.
- d) There shall be two to four contact hours per week during Fall and Spring semesters for each credit hour assigned to Type-C subjects.

### 10.0 Award of Letter Grades

- a) The subject teacher, having interacted with the students, taught them and having assessed them over the semester, shall award letter grades to the students. Chairman of the concerned degree awarding department will be consulted while finalizing the letter grades. Letter grade in each Type-A subject shall be awarded on a Relative Scale whereas, letter grade in Type-B and Type-C subjects may be awarded on an absolute scale if deemed fit by the subject teacher.
- b) Following steps in awarding letter grades on a relative scale may be followed:
  - i. Minimum marks threshold linked to content mastery shall be established for award of a passing letter grade. Students earning marks below this threshold shall be awarded "F" grade;
  - ii. Expected maximum marks threshold shall also be established. Student(s) crossing the maximum threshold, if any, will be awarded "A+" grade. The grade points of "A+" and "A" are same. As such, it is expected that only exceptional students demonstrating outstanding results are given recognition by award of this grade.
  - iii. Students earning marks between the maximum and minimum thresholds are listed in descending order of merit and the average and standard deviation is computed;



## UG SEMESTER REGULATIONS

- iv. Passing letter grades are awarded according to the table given below, with "A" being the highest passing grade and "D" being the lowest passing grade.
- v. The cluster of students falling within half standard deviation of average marks may be graded as "C+" or "B-";
- vi. Other passing letter grades may be awarded on the basis of clusters of students within narrow ranges for a population less than 100; Or on a normal curve basis if the population of students is more than 100;
- vii. It is not essential that every class should have all letter grades awarded, that is, it is possible that a class does not have any student below the minimum threshold; Or in another scenario in which no student, in the opinion of the instructor, is eligible for the award of "A" grade. There may be cases where no student qualifies for some intermediate grade.
- viii. An upper limit on percentage of students in a subject who can earn a particular passing grade may be placed, if required.
- c) The letter grades and their corresponding grade points (GP) are given in the table below.

**TABLE**

**LETTER GRADES & CORRESPONDING GRADE POINTS**

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	F	W
4.0	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.3	1.0	0	-

- d) Subjects repeated to improve grades, excluding "W" or "WF" grades, will be shown on the transcript with a suffix "R".
- e) The subject teacher may award an "F" grade to a student if he is convinced, while checking the answer script of mid-term or final examination that the student has cheated. The subject teacher will give opportunity to the student to defend himself before award of this "F" grade.

### 11.0 Result Matters

#### 11.1 Result Computation Method

The Grade Point Average (GPA) and Cumulative Grade point Average (CGPA) shall be computed according to the following formula:

$$GPA = \sum (GP_x * CH_x) / \sum CH_x$$

x = 1 to n, where n is the number of subjects in the semester for which GPA is computed.

$$CGPA = \sum (GP_y * CH_y) / \sum CH_y$$

y = 1 to m, where m is the number of total subjects covered in all semesters up to the semester for which CGPA is to be computed.

### 11.2 Authority to Compute Results

Grade points (GP) in each subject, Semester Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA) of each student shall be computed and notified by the Controller of Examinations at the end of each semester.

### 12.0 Award of "W", "WF", "I" and "IP" Grades

#### 12.1 Withdrawal ("W" Grade)

A student may be allowed to withdraw from a subject in which he is registered. Applications (Form 1) to withdraw from a subject shall be entertained latest up to the 6th study week during Fall and Spring semesters and up to 3rd study week during Summer semester. Withdrawn subjects shall appear in the transcript with a letter grade "W", and shall not be used in computation of GPA. In the transcript, subjects repeated after withdrawal will not be suffixed with a "R".

#### 12.2 Forced Withdrawal ("WF" Grade)

A student registered in a subject may not be permitted to continue due to shortage of attendance or other disciplinary action. Such students shall be awarded a "WF" (Forced Withdrawal) grade. It shall appear in the transcript as such, and shall not be used in computation of GPA. Subjects repeated after forced withdrawal will not be suffixed with "R". A student who does not drop a subject nor appear in any assessment instrument will not be eligible for "WF" grade and will be awarded a "F" grade.

#### 12.3 Incomplete "I" Grade

A student, who because of illness or any other acceptable fails to complete the required instruments in any subject may be awarded an "I" (Incomplete) grade as an interim grade. Students having less than 50% attendance will not be eligible for award of this grade. This grade shall appear the transcript temporarily until it is replaced by the actual grade and will not be treated as "F" grade. The student of

## UG SEMESTER REGULATIONS

receiving such a grade shall make up the unfinished portion of his subject to the satisfaction of the faculty member who awarded this grade, and is given a letter grade as per regulation 10 at the discretion of the faculty member without prejudice to the previous grade "I". In case, the student fails to complete the unfinished portion within the following semester his "I" grade would be converted to "F" grade by the Controller of Examinations. The responsibility for completing the unfinished portion and satisfying the faculty member lies with the affected student.

### 12.4 In Progress "IP" Grade

- a) Type "C" subjects, like theses, projects, studio work etc., spread over more than one semester may be graded as "IP" until completion of these subjects. This grade shall be recorded in the transcript and will not be treated as "F" grade.
- b) Each portion of a Type "C" subject spread over two semesters may have been prescribed different nomenclature and different subject code. First portion of such a subject may be graded as "IP" upon completion, if the department decides to award the final letter grade upon completion of the second portion.
- c) It shall appear in the transcript as such, and shall not be used in computation of GPA. Grades assigned in the semester in which the subjects are completed will be used in computation of Semester GPA with total credit hours of the subjects being counted for this purpose.

### 13.0 Repetition of Subjects

- a) Students are permitted to repeat subjects to improve their grades in a semester within their maximum credit hours registration limit.
- b) Separate repetition of Type B part or Type A part of a subject, which is combination of Type A and Type B, is permitted.
- c) In case of repetition of a subject, the new grade earned shall replace the previous grade, whether high or low, in computation of CGPA.

### 14.0 Academic Probation and Separation

- a) A student will be placed on Warning if his GPA falls below 2.0 in any semester with his CGPA remaining greater than 2.0.
- b) A student will be placed on Probation if his CGPA falls below 2.0 after any semester.
- c) A student will be separated from the University if he remains on probation for two consecutive regular semesters. Advantage of repetition in Summer semester, falling in between or after the two regular semesters on probation, being give to the student.
- d) Separated students can apply to the Vice Chancellor for re-admission. If their application is accepted, the concerned department will transfer subjects from the previous registration in accordance with the prescribed rule and assign them to an Entry Session for the purpose of computing their maximum degree duration. They will be allotted new entry session as per the recommendation of the department and new registration number.
- e) A re-admitted student will not be granted second re-admission if he is separated second time from the University.

### 15.0 Changing Discipline after Admission

- a) A student, after first year of study at the University, may opt for change in discipline. The minimum admission merit of the discipline, being opted for, must be equal or lower than the merit of the opting student at the time of his admission.
- b) The student opting to change his discipline after first year must apply to the Vice Chancellor through his Chairman and the Dean. Acceptance shall depend on the availability of seats in the opted discipline.
- c) On acceptance of his request, the student shall start afresh with credit being given for any University core subjects studied in the first year in the original discipline. He will be issued new registration number and his maximum permissible duration count will start afresh.
- d) Students cannot opt for change in discipline after their second year at the University.

## UG SEMESTER REGULATIONS

### 16.0 Award of Degree and Merit Position

- a) Students, who are eligible for the award of degree, are required to submit a Degree Requirements Completion Form (Form 2) to their respective chairman for onward submission to the Controller of Examinations. Degree status would be decided only after receipt of this form.
- b) Students shall qualify for the award of undergraduate degree if they earn a minimum CGPA of 2.0 and they satisfy the following conditions:
  - i. Have no compulsory outstanding subject with "W", "WF", "I" and "F" grades during all semesters of a degree program.
  - ii. Have repeated elective subjects in which "W", "WF" or "F" grades have been earned or have studied alternate elective subjects in lieu of these to fulfill the credit hours requirement.
  - iii. Have completed the prescribed number of credit hours.
- c) Students shall qualify for a "Degree with Honours" if they satisfy the following conditions:
  - i. Have earned a CGPA of 3.70 or above out of a maximum of 4.00;
  - ii. Have not repeated a subject;
  - iii. Have not withdrawn from a subject with a "W" or "WF" grade; and
  - iv. Have not earned an 'F' grade in any core or elective subject during the course of study.
- d) Medals and merit positions will only awarded to students having earned degree with honours. The awards will be based on the CGPA earned at the time of graduation. Comparison will be made within the students of same entry session graduating in the minimum permissible duration. Immigrating and re-admitted students will not be eligible for any medal or merit position.

### 17.0 Dean's Honour Roll

At the end of each semester, there shall be a "Dean's Honour Roll" of students earning a Semester GPA of 3.7 and above without any "W" or "WF" or "F" grade while registered in at least 15 credit hours during that semester. There shall not be any Deans's Honour Roll for summer semester result.

### 18.0 Grievance Committee and Grade Change Request

- a) The examination regulations provide sufficient transparency by mandating teachers to show result of all assessment instruments including final examination to their students. Sufficient time is provided to students, even after finalization of the award list, to point out errors and omissions and get them rectified. As such, the following aspects will neither be reviewed nor discussed while interpreting the provisions of this regulation:
  - i. Marks awarded by the teacher in any of the assessment instruments;
  - ii. Letter grade thresholds;
- b) A student has two options for redress of grievances. The first option can only be exercised during the semester and the second option after declaration of semester results.
  - i. During the semester: A student may file a grievance petition with the Chairman of his department during a semester if sufficient opportunity is not provided to him to review the assessment instruments as prescribed in the Examination regulations. The Chairman will form a 3 member departmental Committee headed by a senior faculty member to redress the grievance. It will be mandatory on the Committee to hear both sides (student and the teacher), and recommend corrective action within 5 days after filing of the grievance. The recommendations of the Committee will be binding on the teacher as well as the student.
  - ii. After Declaration of Semester Result: A student may submit a Grade Change Request (Form 3) to the Chairman's Office stating the specific reason for change in grade. Grade Change requests must be submitted not later than one week after the first grade was posted or within the first week of the following semester, whichever is later. The request will be routed to the concerned faculty member. Normally, the only person who can change a grade is the faculty member who gave the grade; however, in case that faculty member is no longer available or cannot be reached, the department chairman has the authority to evaluate the situation and



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grade, if required. When a grade is to be changed, the chairman shall forward the case to the Dean with justification for change. The result will be modified after approval of the Dean.

### 19.0 Students Registration

- a) Regular and casual students may register for subjects being offered during that semester within their maximum permissible credit hours registration limit.
- b) The student may add or drop subjects within first two weeks of Fall and Spring semesters and within first week of Summer semester.
- c) A student, who is fulfilling requirements of an "I" grade in a semester, is not required to register in the subject in which he has been awarded an "I" grade.
- d) Students deciding not to register in a semester must inform the department of their decision. Failure to register without any prior intimation may result in separation from the University.

### 20.0 Hostel Accommodation

Local casual students will not be eligible for hostel accommodation. However, foreign casual students may be allowed to continue staying in hostels by the Senior Warden after approval of the Vice Chancellor.

### 21.0 Attendance Requirements

- a) Students failing to maintain a minimum attendance of 75% in a subject during a semester shall be awarded a "WF" grade. Chairman in consultation with the respective Dean shall review cases of students seeking relaxation of up to 10% in attendance requirement. The relaxation shall be allowed after approval by the Dean. Any relaxation in excess of 10% shall be forwarded to the Vice Chancellor through the respective Dean for final decision.
- b) Leaves availed by a students after approval of the Chairman will not be counted towards attendance;

- c) Students eligible for award of an "I" grade will be awarded such a grade only if their attendance is at least 50%.
- d) Students not registering in a particular semester are required to intimate the department in writing about their decision. Failure to register without prior intimation may result in separation from the University.

### 22.0 Special Provisions

**22.1** In all cases where the regulations are silent, the decision of the Vice Chancellor shall be final.

**22.2** Interpretation of these rules and regulations by authorized officers of the University shall be final.

**22.3** The University authorities reserve the right to make any changes in the existing regulations, rules, fee structure and courses of study that may be considered necessary at any time without prior notice.

**22.4** No student is allowed to maintain simultaneous enrollment in any other program of studies in the University or any other educational institution within or outside Pakistan, unless permitted by the competent authority as an Exchange Student.

**22.5** In case a student enrolled in this University is found to be a regular student of some other University/institution whether local or foreign, his admission in this University shall be canceled.

**22.6** Students are required to know the rules and regulations mentioned in the prospectus and notified time to time. Ignorance of rules and regulations does not absolve them of their responsibilities and shall not be treated as an excuse.

**22.7** The Vice Chancellor has been authorized by the Syndicate, on the recommendations of the Deans, to make amendments in these regulations and remove any difficulties faced during implementations of these regulations.



## 1.0 EVALUATION PROCESS OF SUBJECTS

### 1.1 Evaluation of Type-A Subjects

- a) For mid-term and final examinations of Type-A subjects, the teacher of a subject shall set the question paper of that subject, supervise its examination, mark the answer books and prepare the award list. Any teaching resource provided to assist a teacher cannot be tasked to mark mid-term and final examinations answer books.
- b) Every teacher of Type-A subjects shall return the marked quizzes, assignments, etc. and mid-term examination scripts to the students for review, and in case of presentations etc. communicate the earned score to the student within one week of the event. Mid-term scripts, however, would be recovered from the students and deposited with the chairman concerned.
- c) At the end of scheduled teaching period of a semester but before commencement of the final examinations, the teacher shall prepare and display the Interim Award List. Composition, display, correction, and reporting requirements/procedures of Interim Award List shall be as prescribed in these rules.
- d) Teachers would mark the final examination scripts, and prepare and display complete Award List, excluding letter grades, within one week after the examination of the subject.
- e) The students may be shown the final examination marked scripts before submission of Comprehensive Award List to the Controller of Examinations, if they so desire.

### 1.2 Evaluation of Type-B Subjects

- a) Teachers of Type-B subjects shall keep all students informed of their performance at every stage in each category of task performed. Immediately after the end of each stage/assessment event, teachers shall prepare and communicate the earned score to the student in that

stage/assessment event.

- b) At the end of semester and before the end of examination period, teachers shall prepare and display the Interim Award List. Content and other requirements regarding Interim Award List shall be as prescribed in these rules.
- c) After following the procedures and requirements regarding Interim Award List, the teachers shall prepare and display complete Award List, excluding letter grades, within one week after the end of scheduled teaching period.

### 1.3 Evaluation of Type-C Subjects

- a) Teachers of Type-C subjects shall keep all students informed of their performance at every stage in each category of task performed. Immediately after the end of each stage/assessment event, teachers shall prepare and display a list of earned score of each student in that assessment instrument.
- b) At the end of first of the two semesters of a Type-C subject and before the end of examination period, teachers would prepare and display an Intermediate Award List. This list would be similar to the Comprehensive Award List of Type-A and Type -B subjects except that letter grade assignment based upon this list will be limited to "IP" Grade.
- c) At the end of second of the two semesters of a Type-C subject and before the end of examination period, teachers shall prepare and display the Interim Award List. Content and other requirements regarding Interim Award List shall be as prescribed in these rules.
- d) Within one week of the conduct of Viva-voce/Jury examination, internal and external examiners shall prepare and display complete Award List excluding the letter grades.

### 1.4 Interim Award List

- a) Interim Award List would show the percentage as well as weighted score of each stage/assessment instrument of that subject including the mid-term examination in case of Type-A subjects.

## EXAMINATION REGULATIONS

- b) The Interim Award List will be communicated to all students via electronic means or/and displayed on the Notice Boards for at least two working days to permit students to point out any anomalies, errors, omissions etc. in the list.
- c) The teachers shall give due consideration to any anomalies, errors, omissions etc. in the list pointed out by any student, and may correct the list.
- d) Any further processing of the list shall be carried out only after it has been displayed on the Notice Boards for the mandatory period and decisions regarding all matters pointed out by students have been taken.

### 1.5 Comprehensive Award List

The Comprehensive Award List shall show, for each student:

- a) The weighted combination of the Interim Award and Final Examination award in percentage format and Letter Grades corresponding to the comprehensive award.
- b) Sealed Comprehensive Award List will be sent to the Controller by the concerned teacher with a copy to the Chairman for record only.

### 1.6 Delay in Submission of Results

After passage of 6 working days from the date of scheduled final examination period, Controller of Examinations will submit a report to the Vice chancellor on the status of submitted results. The Vice Chancellor will decide on the disposal of teachers failing to submit their results within the prescribed time.

## 2.0 Conduct of Examination of Type A Subjects Under Semester System

### 2.1 Question Papers

- i. All question papers are set by the concerned teacher.
- ii. The paper setters, who also ensure their correctness, supervise the photocopying or duplicating of the papers.
- iii. Question papers are kept in the safe custody of the teacher till the start of examination. He shall bear legal and moral responsibility for the safe custody and secrecy of the question papers.

### 2.2 Reference Material during Tests/ Examinations

Prior to class tests, mid term/final examination, the subject teacher announces such books, notes or other material that can be referred to by the students during the test or examinations. All other books, notes, papers, etc., are withdrawn from the examinees.

### 2.3 Examination Schedule

The Chairman of the department publishes the mid term and final examination schedule at least two weeks before start of the examinations in accordance with the University academic calendar.

### 2.4 Conduct of Mid-Term and Final Examinations

- a) The chairman shall depute teachers or staff as Deputy Superintendent and Invigilators for the conduct of examinations. The number of invigilators will be estimated on the basis of one invigilator for every 25 students.
- b) The subject teacher shall be the Superintendent for the conduct of examination. The Superintendent shall ensure the following:-
  - i. That all answer books used in the examination are signed or initialed. The teacher may require the students to answer on the question paper itself. No other answer books are to be used in these cases.
  - ii. Answer books are issued to the invigilators 5 minutes before the commencement of the examination and retrieved at the end of the examination.
  - iii. The absentee report, if any, is prepared and forwarded to the Chairman's office at the end of each examination.

### 2.5 Teachers or Staff acting as invigilators are detailed by the respective Chairman. They ensure the following:

- i. That the students are identified through means such as University identification card or a valid photo ID.
- ii. That the students are warned against the use of unfair means and have been advised to surrender mobile phones, notes, papers or other unauthorized material before the commencement of the examination.
- iii. That the students are not allowed to talk with or copy



## EXAMINATION REGULATIONS

from other students during the examination.

- iv. That no student is allowed to join the examination 30 minutes after its commencement.
- v. That no student is allowed to submit the answer sheet and leave the examination room within 30 minutes of commencement of examination. Visits to toilets are carefully controlled.
- vi. That the question papers and answer books of a student detected using unfair means or assisting another candidate, are taken away and the matter is reported to the respective chairman. The superintendent records all available evidence to be used as written proof later on.
- vii. That the students write their registration numbers, name and class on the front cover of each additional answer sheet used. If more than one answer book is used, these are stapled together.

### **2.6 The subject teachers, being the Superintendent(s), shall:**

- a) Supervise distribution of the question papers to the students according to the schedule published.
- b) Be available in the examination center during examination of their subject to clarify any query and to collect answer books after the examination. In case of multiple examination centers, they must remain available near the centers.
- c) Report any incidence of unfair means or disobedience or rowdy-ism detected in the examination center to the Controller of Examinations for processing under rules governing use of unfair means during examinations. The report must include collected evidence (if any), written and signed statement by the invigilator detecting the incidence and of the candidate(s) found involved.

### **4.0 Disposal of Answer Scripts**

Answer sheets of mid term and final examinations will be stored in the respective department for one semester after declaration of result of a semester. The sheets would be disposed off subsequently in a suitable manner as decided by the concerned Chairman.

### **5.0 Transfer of Credits of Subjects For Migrated Students**

5.1 Students from other HEC approved universities and programs accredited by PEC or PCATP, may apply for migration to this University in the same programs, in accordance with University's Migration Rules. Following conditions shall govern transfer of subjects (credits) to the University for subjects studied elsewhere. Subjects that do not satisfy these conditions shall not be transferred nor given any credit.

- i. The subject must correspond to a subject offered by UET or be deemed equivalent in depth and intensity.
- ii. The student must have earned at least "40%" marks in case of absolute grading system or a minimum of "C" grade or higher in a letter grading system similar to the one in this University. In case of any other grading system, the department shall decide with the above minimum limits in perspective. In case, both letter grades and marks are mentioned on the transcript, only letter grade will be considered for the purpose of transfer of semester credits.

5.2 The accumulative credits accepted for transfer in any program should not exceed one-half (50%) of the total credits required to complete that particular program, in any case.

5.3 The credits transferred are counted towards the degree requirements of the student. However, GPA of transferred credits shall not be counted towards the calculation of CGPA, and that only "Transferred" shall be written against those subject(s) in which transfer of credits was allowed. In addition, migrated students shall neither be eligible for a merit position nor degree with Honours.

5.4 Migrating student may be deficient in subjects as compared to the class which he has joined. Such a student shall repeat these subjects. In case, he is studying a particular subject for the first time, it will not be classified as repeated subject for him.

### **6.0 Transfer of Credits of Subjects For Re-admitted Students**

"Subjects" and "grades of subjects", studied during the previous five years from the date of re-admission, in which

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they have earned a grade of "C" or above shall stand transferred and the students shall be placed in the semester recommended by the department. In addition, re-admitted students shall neither be eligible for a merit position nor degree with Honours.

### 7.0 Transfer of Credits of Subjects For Double Degree Students

Credit hours of subjects, as recommended by the concerned department, in which they have earned a minimum of 40% marks or a minimum grade of "C" (as the case may be) during their first degree program within the University shall stand transferred and they shall be placed in the semester recommended by the department. The credits transferred are counted towards the degree requirements of the student. However, GPA of transferred credits shall not be counted towards the calculation of CGPA, and that only "Transferred" shall be written against those subject(s) in which transfer of credits was allowed. In addition, double degree students shall neither be eligible for a merit position nor a degree with Honours.

### 8.0 Transfer of Credits of Subjects For Exchange Students

a) Following conditions shall govern transfer of subjects (credits) to the University for subjects studied elsewhere as Exchange students under an HEC or University approved scheme. Subjects that do not satisfy these conditions shall not be transferred nor given any credit.

- i. The subject must correspond to a subject offered by UET or be deemed equivalent in depth and intensity.
- ii. The student must have earned at least "40%" marks in case of absolute grading system or a minimum of "C" grade or higher in a letter grading system similar to the one in this University. In case of any other grading system, the department shall decide with the above minimum limits in perspective. In case, both letter grades and marks are mentioned on the transcript, only letter grade will be considered for the purpose of transfer of semester credits.

b) The credits transferred are counted towards the degree requirements of the student. However, GPA of transferred

credits shall not be counted towards the calculation of CGPA, and that only "Transferred" shall be written against those subject(s) in which transfer of credits was allowed. In addition, such students shall neither be eligible for a merit position nor degree with Honours.

### 9.0 Final Transcript Issued by Examination Branch

Examination Branch will issue a final transcript after the student completes all the degree requirements. The recording of result on final transcript will be according to the following:

- a. The transcript will be chronological showing all subjects registered in each semester and corresponding grades earned.
- b. All "I" grades would be replaced by the grade earned or "F" grade if requirements have not been completed.
- c. "IP" grade in a subject or sequel of subjects would be shown in the semester(s) in which it has been awarded. It will not be counted towards computation of GPA or CGPA in these semesters.
- d. The semester grade awarded in a subject, which is a follow up of a subject or subjects in which "IP" has been awarded in previous semesters, would be counted towards computation of semester GPA and CGPA by considering the total credit hours assigned to the subject or a sequel of subjects.
- e. Elective subjects in which the student has earned "F" grades may not be counted towards computation of CGPA if alternate elective subjects have been studied in their place. This will not be automatic. The student must apply to the Controller Examination to avail this facility.

### 10.0 Results Declaration by Examination Branch

The student would be able to see his subject grades on the Examination portal as soon as those have been submitted by the teachers to the Controller Examinations. The status of these results would be "Provisional". When all results have been received by the Branch, official results would be declared within one week following due process of scrutiny and verification. The status of these results would change to "Confirmed" after declaration.

## EXAMINATION REGULATIONS

### EXCERPTS FROM CURRICULUM RULES

#### 1.Credit Hours Requirement For Graduation

From a minimum of 130 to a maximum of 136 credit hours for a four years program and from a minimum of 162 to a maximum of 170 credit hours for a five years program.

#### 2.Level of a Subject

Level of a subject implies the level of contents complexity. Usually:

- Level "1" implies first year subjects;
- Level "2" implies second year subjects;
- Level "3" implies third year subjects;
- Level "4" implies fourth year and fifth year level subjects/ research depending upon the undergraduate program;
- Levels "5", "6", and "7" imply postgraduate subjects/ research.

#### 3.Subject Identification Number

The subject identification number of a Type-A (Theory) subject will be of the format DD ABC wherein:

- DD indicates the department/ discipline that owns the subject and it may be 2 to 4 alphabets;
- ABC refers to a 3 digit number with "A" indicating the Level of the Subject, "B" may indicate the specialization stream and "C" may be the serial number of that subject in that stream at that level; Or the department may formulate its own policy for defining "B" and "C" digits.
- For a Type-B (Laboratory) subject coupled with a Type- A subject, an additional alphabet of "L" is added after the 3 numeric digits ABC (Note: Suffix "L" is usually not mentioned in the curriculum. It, however, appears on the transcript).

#### 4.Credit Hours Nomenclature

A subject credit hours allocation is represented as X(Y,Z).

- X indicate the total number of credit hours allocated to the subject;

- Y indicate the credit hours assigned to Theory portion of the subject;
- Z indicate the credit hours assigned to Laboratory/ practical portion of the subject;
- $X = Y + Z$ .

#### 5.Co-requisites

Each portion of a subject having theory portion as well as practical portion will be classified as co-requisites for students registering in those subjects for the first time. For students repeating subjects, these portions will not be treated as co-requisites.

#### 6.Nomenclature of Type C Subjects

A Type C subject spread over two semesters may be assigned nomenclature with an additional suffix, like Project-I and Project-II, each with different subject code but linked through pre-requisite relationship and specified as such in the curriculum.

#### 7.University Requirements (23 Credit Hours)

There shall be a set of courses called the University Requirement which will be part of the curriculum of each department. The proposed University Requirements are 24 credit hours distributed as under.

##### 7.1 Science and Mathematics –6 Credit Hours

A 100 level course from Mathematics Department  
3(3, 0)

A 100 level course from Physics or Chemistry Department  
3(2, 1)

##### 7.2 Humanities and Social Sciences – 13 Credit Hours

HU-221 Technical Writing & Presentation Skills 3(3, 0)

HU-111L Communication Skills 1(0, 1)

IS-101 Islamic/ Ethics and Pakistan Studies I 3(3, 0)

IS-201 Islamic/ Ethics and Pakistan Studies II 3(3, 0)

\* A 300 or 400 level course of  
Management & Finance 3(3, 0)



## EXAMINATION REGULATIONS / DISCIPLINE

### 7.3 Computer Skills – 3 Credit Hours

One course on Computing 3(2, 1)

### 7.4 Workshop Practice – 1 Credit Hour

ME-100L Workshop Practice 1(0, 1)  
(Smithy, Machine, Fitter, Carpentry Shop, Electrical Shops & Model Making)

### 8. Departmental Curriculum Distribution

Each department shall prepare its own curriculum over and above the University Core for approval of the Academic Council. Since University Core is 23 credit hours, the department may propose up to 113 credit hours of its curriculum. It is suggested that Higher Education Commission (HEC) curriculum may be used as a reference with the following elements:

- Management and Social Sciences Core – if required.
- Science and Mathematics Core – if required.
- Interdisciplinary Core – if required.
- Departmental Breadth Core.
- Departmental Depth Core (Electives)

## DISCIPLINE

### DISCIPLINE MATTERS

#### CODE OF HONOUR

Every Student Must Observe the Following Code of Honour

- He must be loyal, faithful in his religious duties and respect the conviction of others in matters of religion.
- He must be loyal to his country and refrain from doing anything which might lower its honour and prestige.
- He must be truthful and honest in dealings with all people.
- He must respect the elders and be polite to all

especially women, children, old people, the weak and helpless.

- He must respect his teachers and others in authority in the University.
- He must keep clean in body and mind, standing for clean speech, sport and habits.
- He must help his fellow beings especially those in distress.
- He must devote himself faithfully to his studies.
- He must observe thrift and protect property.

### ACTS OF INDISCIPLINE PUNISHABLE UNDER UNIVERSITY RULES

#### 1. No Student shall

- a) Smoke in the class room, laboratory, workshop, library, examination hall, convocation hall and during studio work or academic functions.
- b) Consume alcoholic liquor or other intoxicating drugs within the University Campus or a hall of residence or during the instructional, sports or cultural tours, or survey camps, or enter any such place or attend any such tour or camp, while under the influence of such intoxicants.
- c) Organize or take part in any function within the University campus or a hall of residence, organize any club or society of students except in accordance with the prescribed rules and regulations.
- d) 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.
- e) Stage, incite or participate in any walkout, strike or other form of agitation against the University or its teachers and officers.

## DISCIPLINE

### 2. A Student Who

- a) Commits a breach of any of the rules of conduct specified in these regulations; Or
- b) Disobeys the lawful order of a teacher or other person in authority in the University; Or
- c) Habitually neglects his work or habitually absents himself from his classes without reasonable cause; Or
- d) Willfully damages University property or the property of a fellow student or any teacher or employee of the University; Or
- e) Does not pay the fees, fines or other dues levied under the University ordinances rules and regulations; Or
- f) Does not comply with the rules relating to residence in the hostels or halls of residence or the rules relating to the wearing of uniform or academic dress; Or
- g) Uses indecent language, wears immodest dress, makes indecent remarks or gestures or behaves in a disorderly manner; Or
- h) Commits any criminal, immoral, or dishonourable act whether within the University campus or otherwise which is prejudicial to the interest of the University.

shall be guilty of an act of indiscipline and shall be liable for each such act to one or more of the penalties under the General Discipline Rules

## AUTHORITIES TO CHECK INDISCIPLINE

### 1. 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 of the University. Should such misconduct occur in room when the student is under the charge of a demonstrator, the latter shall report the matter without delay to the Chairman of the Department.

### 2. The Librarian shall

Be responsible for maintenance of order in the Library. In case of disorderly conduct or any breach of rules, he may require the student so offending to withdraw from the

library for the remainder of the day and shall immediately report the offence to the Chairman of the Library Committee.

### 3. The Senior Warden/Warden and the Resident Tutor

shall Be responsible for maintenance of order among the students in halls of residence or hostels.

### 4. The Director of Physical Education shall

Be responsible for the maintenance of order among the students on or near the play grounds or while otherwise under his charge.

### 5. Committee of Discipline

There is a Committee of Discipline to deal with serious cases of indiscipline. It consists of the following members as per University of Engineering and Technology, Punjab Act V of 1974:-

- (a) Chairman to be nominated by the Vice-Chancellor
- (b) Two Professors to be nominated by the Academic Council;
- (c) One member to be nominated by the Syndicate;
- (d) Director Students Affairs (Member/Secretary)
- (e) Senior Tutor of the University; and
- (f) Senior Warden of the University Hostels.

- The term of office of members of the Committee excluding ex-officio members shall be two years.
- The quorum for a meeting of the Committee of Discipline shall be four member.

The functions of this Committee are:-

- to propose Regulations to the Academic Council for the conduct of University Students, Maintenance of Discipline and breach of discipline; and
- to perform such other functions as may be prescribed by Regulations

## DISCIPLINE

### PENALTIES FOR ACTS OF INDISCIPLINE

The penalty or penalties imposed shall be appropriate and proportioned to the nature and gravity of the Act. The penalties which may be imposed and the authority or authorities competent to impose each kind of penalty are specified below:-

	PENALTY	AUTHORITY COMPETENT TO IMPOSE THE PENALTY
a)	Exclusion from class room, Laboratory, Workshop or field work for the periods concerned, for not more than four such consecutive periods.	Teacher Incharge
b)	Exclusion from the game or the Field for not more than one week.	Incharge of the Game
c).	Exclusion from Instructional or Sports Tour or Survey Camp.	Teacher Incharge or Head of Department / Chairman
d).	Exclusion from the Department for a period not exceeding two weeks.	Head of Department / Chairman
e).	Exclusion from the Library for not more than two weeks.	Chairman, Library Committee
f).	Exclusion from all classes or any Class in any Faculty for a period not exceeding two weeks.	Dean of the Faculty
g).	Exclusion from the Hall of residence for a period not exceeding six months.	Resident Tutor
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	Director, Students Affairs
k).	Suspension or removal from a position of authority in the University Sports.	President Sports committee
l).	Cancellation or Remission of fee or University Scholarship	Dean of the Faculty
m).	Fine upto Rs. 1000/-	Lecturer / Resident Tutor
n).	Fine upto Rs. 2000/-	Assistant Professor / Warden
o).	Fine upto Rs. 3000/-	Associate Professor
p).	Fine upto Rs. 5000/-	Chairman of Teaching Department/ Professor / Senior Warden / Director Students Affairs.
q).	Fine without limit	Dean of the Faculty
r).	Rustication from the University for a period not exceeding six months	Associate Professor
s).	Rustication from the University for a period not exceeding one year.	Chairman of a Teaching Department / Professor / Committee of Discipline
t).	Rustication for any period	Dean of Faculty
u).	Expulsion from the University	Committee of Discipline

### GENERAL DISCIPLINE RULES RELATING TO STUDENTS

1. When a case against a student is referred to the Committee of Discipline, the Committee may, if it deem 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. The Vice-Chancellor shall have the power to impose any of the penalties mentioned in "Penalties for Acts of Indiscipline" or to refer any case to the Committee of Discipline.

3. A Teacher or officer mentioned in "Penalties for Acts of Indiscipline" in whose presence or in relation to whom an act of indiscipline 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 or penalties severer than those which he is competent to impose are called for in the case; he shall follow the procedure specified below:-

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 it to the appropriate authority.

If he is the Dean of the Faculty, he shall refer it to the appropriate authority or the Committee of Discipline.

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 of Discipline, the penalty of rustication or expulsion is not called for in a case referred to it, it may impose any other penalties mentioned in "Penalties for Acts of Indiscipline".

6. When a Teacher or an Officer has imposed penalty/penalties on a student under "Penalties for Acts of Indiscipline", the later shall not be liable to a higher or an additional penalty unless the offending student has been given a reasonable opportunity of showing cause against the proposed action.



## DISCIPLINE / MIGRATION REGULATIONS & RULES

7. An appeal against the imposition of penalty may be made within a week's time to the teacher 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 Discipline Committee for its consideration and decision within a maximum of six weeks to dispose of the case. A final appeal against the imposition of penalty may then be made to the Committee as provided in Rule 11(i) of the General Discipline rules relating to students.

8. An appeal against a decision imposing a penalty mentioned in clauses (r) and (s) of "Penalties for Acts of Indiscipline" shall lie with a Committee consisting of the Vice-Chancellor and the Deans of Faculties. No appeal shall lie against a decision of an authority imposing a penalty other than that mentioned in sub-rule (i) of this rule except on the ground that such authority has imposed a penalty which it was not competent to impose.

9. 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. No appeal by a student 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 reason extent this period.

10. 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 of or damage to property belonging to the University or 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 reasonable time, the Vice-Chancellor may expel him from the University.

11. The Syndicate may for special reason re-admit a student rusticated or expelled from the university under these rules, if otherwise eligible.



### MIGRATION REGULATIONS AND RULES

1. Subject to the provision of Regulations, the Vice chancellor may admit a student to the University by migration from other Universities or Institutions according to the regulations.
2. No student shall be admitted to First Year and Final Year classes by migration.
3. Admission by migration to classes other than first year class shall not be allowed ordinarily after the expiry of three weeks from the commencement of the session.
4. No student shall be admitted by migration from a University or Institution in Pakistan unless he produces a "No Objection Certificate" and Good Moral Character Certificate to the effect that the student has not been debarred from taking University examinations and suspended or not expelled or rusticated from the University or Institution from which he intend to migrate and that no disciplinary action is pending against him.
5. (a) An application for admission by migration shall be accompanied by a detailed marks certificate showing the examinations passed by the applicant at his parent university. The applicant is required to be in good standing with a minimum CGPA of 2.5 out of 4.0.  
(b) No student admitted to any University or Institution against seats reserved for special categories shall be eligible for admission by migration.

## MIGRATION REGULATIONS & RULES

- (c) Only those students who possess academic record comparable with admission requirements of this University (for their particular Entry Session) shall be considered for admission by migration subject to availability of seats in the concerned department.
  - (d) No student shall be migrated to the University who carries any of his papers of his previous years.
  - (e) 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.
6. (a) No migration shall be allowed to and from the constituent/ affiliated colleges.
- (b) Migration application will only be entertained on the prescribed application form, obtainable from UET website [www.uet.edu.pk](http://www.uet.edu.pk) . Migration form fee of Rs. 500/- will be paid at the time of submission of application form.
- (c) Migration fee shall be charged from the candidates allowed to migrate to the University from other Universities/Institutions under the rules at the following rates:-
- I) Rs: 2,50,000/- (Rupees Two Lacs and Fifty Thousand only) in case of candidates of Universities/ Institutions abroad.
  - II) Rs: 2,00,000/-(Rupees Two Lacs only) from applicants admitted elsewhere in Pakistan on Self Finance Basis.
  - III) Rs: 25,000/- (Rupees Twenty Five Thousand only) per semester to be studied in University of engineering and Technology, Lahore and its campuses from the applicants not covered in the first two cases above.

**Note:** The genuine and deserving cases falling under category (III) mentioned above would be submitted to the Syndicate for waiver of the fee.

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 after payment of prescribed fee of Rs. 500/- for ordinary case and Rs. 1000/- for urgent case (non-refundable).

8. No migration certificate shall be issued unless the student has cleared all University dues.
9. In case of student who has been debarred from taking University examination or has been expelled or rusticated, no migration certificate shall be issued so far as the punishment is in force.
10. The Dean of Faculty concerned shall be competent to issue a migration certificate on the prescribed form.
11. A student who has obtained Migration Certificate from the 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 regulation provided that his absence from the current teaching session of that class does not exceed four weeks and further that he surrenders the Migration Certificate.
12. Any change / addition/ modification, if made, in the above regulations, will also be applicable.



## VISITING STUDENTS POLICY

1. Visiting students are classified as students currently admitted into a B.Sc (4 years), M.Sc/ M.Phil (18 years) or PhD program of any university within or outside Pakistan and enrolled for one semester only to study selected subjects at UET Lahore. Registration in a maximum of five courses by any individual student at undergraduate level and two courses at postgraduate level is permissible.

## FEE REGULATIONS

2. The candidates desiring to study one or more subjects in any department of UET shall apply directly to the Chairperson concerned at least 15 days before commencement of a Semester/Term. The Chairperson, after discussion with the concerned teacher, may approve or reject the request. In case the request is accepted by the Chairperson, it will be forwarded to the respective Dean. The Dean after due deliberation may accept or reject the request. In case of acceptance by the Dean, the request will be forwarded to Convener Admission Committee for further action.
3. CAC shall issue a registration number to the student after submission of (a) total dues, (b) matriculation or equivalent certificate and (c) a No Objection Certificate from the parent university of the applicant. A folder shall be opened in the Students Section and a notification shall be issued with copies to Controller, Treasurer, concerned Dean and Chairperson of the department, and to the Security Office.
4. The registration number shall be of the following nomenclature:  
YYYY-PP-DD-V-XX where
  - YYYY: Year of application like 2012, 2013 etc.
  - PP: Program like BSc, MS, M.Phil or PhD
  - DD: Department like EE, Civil, ME etc
  - V: Shall be written as such indicating Visiting Status
  - XX: Two digit Integer number starting from 10
5. The Visiting student shall be issued the University ID temporary card but he shall not be eligible for any benefit admissible to regular students of the university like hostels, library, sports facility etc. He shall have the pay all dues in advance and shall not be eligible for financial assistance or installments facility. Any dues once paid shall be non-refundable.
6. The student shall be governed by all rules regarding academics and discipline.
7. Studentship of a Visiting student shall end on completion of the Semester in which he is registered in a course. Second time registration as a Visiting student is not

permissible.

8. Examination Branch shall include his name in the student record of the concerned department facilitating his registration and issuance of DMC / Transcript on completion of the said subject. Examination record shall be maintained for any future reference.
9. Fee structure is given below:
  - Registration Fee: Rs 5,000.00
  - Fee per Course Including any laboratory if applicable: Rs 20,000.00 (UG) /Rs 25,000.00 (PG)

## FEE REGULATIONS

1. Periods of fees and Other Charges
  - a) The fees and other charges are categorized as:
    - One time payments at the time of admission.
    - Annual recurring fees;
    - Monthly recurring fees.
  - b) During each year of a student's stay at the University, all recurring fees (annual or monthly) are calculated on the basis of twelve months period and are charged in two installments payable at beginning of Fall and Spring semesters.
  - c) No separate fees are charged from students registering during summer semester.
  - d) A minimum of 48 months or 60 months recurring fees (annual or monthly) are admissible to students graduating from a four years degree program or a five years degree program, as the case may be.
  - e) Students registering in semesters beyond the minimum prescribed study period will continue to pay six months installments payable at the beginning of Fall and Spring Semesters until submission of their degree requirements completion form (Form 2).
  - f) The hostel charges are payable for the period of occupation, a part of term/semester being counted as full term/ semester. Rent and electricity charges for fans are payable for six months. Electricity charges for room heaters are payable for the winter season for four months.



## FEE REGULATIONS



### 2. Payment of Dues

- a) Casual and regular students shall pay prescribed six months fees irrespective of the number of credit hours registered during a semester.
- b) No relaxation in prescribed fees would be given to students deciding not to register in a semester due to any reason.
- c) Registration in subjects would be cancelled if fees are not deposited by the prescribed deadline. Students having justifiable reasons for seeking relaxation in fee payment schedule must apply to the Vice Chancellor through the Chairman and Dean for this purpose.

### 3. Refund of Securities

The University security, library security, hostel security and mess securities are refunded when a student leaves the University after completion of his degree or the hostel (in case of mess security) after deduction of outstanding dues of the University, library or the hostel, respectively.

### 4. Refund on Admission Cancellation

4.1 Admission Cancellation by Freshly Admitted Students  
All dues paid by the student are refundable excluding the Admission Fee as per the following schedule:

- a) Full (100%) fee refund if admission cancelled up to 7th

day.

- b) Half (50%) fee refund if admission cancelled from 7th to 15th day.
- c) No fee refund if admission cancelled from 16th day onward.

The count of days mentioned in the schedule for determining refund amount, would start from the date falling last from either (i) the date of convening of classes; or (ii) the date of initiation of registration by the university; or (iii) the date of payment of admission dues by the student in the bank.

### 4.2 Admission Cancellation by Other Students

The University security, library security, hostel security and mess securities are refunded when a student cancels his admission before completion of his degree. The interest free loan amount deposited, over and above the tuition fee, by the candidate would be refunded after deduction for months availed at the University. For the purpose of counting availed months, a portion of a month shall be counted as one full month.

All other dues and fees deposited shall not be refunded including migration fee charged from migrated students.

### 5. Financial Assistance and Scholarships

Needy students admitted under categories "A", "I", "N", "L", "O", "P", "R", "T" and "Q" are eligible for scholarships in the form of financial assistance as listed below. As per university policy, only one scholarship is admissible to an eligible student at one time excluding orphan students who may be awarded an external scholarship subject to certain conditions.

- a) Students Eligible For Full Tuition Fee Waiver: Orphans and disabled students are eligible for full tuition fee waiver. However, in order to avail this facility, eligible students will apply to Students Financial Aid and Career Services (FA&CS) Office after joining the university with all the

## FEE REGULATIONS

necessary documents. The office of the Director FA&CS will notify their eligibility after verification and their dues would be adjusted accordingly after notification.

- b) UET Financial Aid to Needy Students of Punjab: The University awards financial assistance in the form of a scholarship equivalent to 50% tuition waiver to needy students of eligible categories. In order to apply for this scholarship, students will apply to Students Financial Aid and Career Services (FA&CS) Office after joining the university with all the required documents as specified by the office of FA & CS. The office of the Director FA&CS will notify eligible students after verification and their dues would be adjusted accordingly after notification.
- c) Financial Aid by External Agencies to Needy Students: Such scholarships are advertised by office of FA & CS. Eligible students may apply for these scholarships.

### 6. University Merit Scholarships

University merit scholarships are awarded to students securing top positions in their departments/ programs. The monthly scholarship amount is equal to monthly tuition fee.



## FEE & OTHER EXPENSES

	FEE AND OTHER EXPENSES	Local Students	International / Overseas Pakistani Students
<b>I</b>	<b>NON RECURRING FEES</b>	<b>(Rs)</b>	<b>(Rs)</b>
1	Admission Fee payable in First Year/Re-admission Fee	1,000	5,000
2	University Registration Fee	500	2,000
3	University Security (Refundable)	500	500
4	Hostel Security (Refundable)	1,000	1,000
5	Mess Security (Refundable)	1,000	1,000
6	Library Security (Refundable)	500	500
7	Verification Fee	1000	1000
8	Survey Camp Charges for Civil, Mining, Geological & CRP Students Only	500	500
9	Email Registration Fee	100	100
<b>II</b>	<b>ANNUAL RECURRING FEES</b>		
1	Tutorial Fee	50	50
2	Inter-University Tournament Fee	50	50
3	Magazine Fee	75	75
4	Medical Fee	250	250
<b>III</b>	<b>MONTHLY RECURRING FEES</b>		
1	Tuition Fee (** See notes below)	5000	7500
2	Lab Fee	100	500
3	Sports Fee	50	50
4	Monthly Tennis/Squash Charges from those who join Tennis/ Squash club	150	150
5	Transport Fee	550 for those who avail daily bus service/ 250 for others	
6	Internet Charges	150	150
7	<b>Hostel Charges</b>		
	a. Room Rent		
	i) Cubicle	150	300
	ii) Dormitory	100	100

Sr/ No.	FEE AND OTHER EXPENSES	Local Students	International / Overseas Pakistani Students
<b>III</b>	<b>MONTHLY RECURRING FEES</b>		
	b. Rent for Fans		
	i) Cubicle	25	25
	ii) Bi-seater	15	15
	iii) Dormitory	10	10
	c. Electricity Charges		
	i) Fans Cubicle / Dormitory	80 / 60	80 / 60
	ii) Lights Cubicle / Dormitory	150 / 120	150 / 120
	d. Sui Gas Charges	95	95
<b>IV</b>	<b>EXAMINATION FEES</b>		
1	First & Second Semester	500 / Semester	500 / Semester
2	Third & Fourth Semester	525 / Semester	525 / Semester
3	Fifth & Sixth Semester	550 / Semester	550 / Semester
4	Seventh & Eighth Semester	575 / Semester	575 / Semester
5	Ninth & Tenth Semester	600 / Semester	600 / Semester
6	Summer School Registration fee	200 per paper	200 per paper
<b>V</b>	<b>CERTIFICATE FEES</b>		
1	Detailed Marks Certificate	100	100
2	Duplicate Degree/ Degree in Absentia/ Degree before Convocation	500	500
3	Merit Certificate	150	150
4	Rechecking of Answer Book	300	300
5	Other Certificate/ Duplicate Certificate	150	150
6	Detail Marks Certificate	On Security Paper	On Security Paper
7	Provisional Certificate	100	100
<b>VI</b>	<b>ALUMNI REGISTRATION FEE (On completion of degree)</b>	500	500



# FINAL MERIT SUMMARY B.Sc. Engineering / B.Sc. Engineering Technology [ENTRY 2016] UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE.

LAHORE CAMPUS																			
Category/ Branch	ELL	MEL	MCL	CIV	PET	CHL	CEL	IML	AE	MME	ARC	CSC	FEL	TEL	EEL	MIN	GEL	CRP	PID
A	82.413	81.106	79.979	79.472	78.586	78.056	78.781	76.275	76.660	75.327	75.266	76.275	73.345	74.552	73.772	72.418	72.772	73.552	72.345
I			66.888		62.375			70.094			67.883					60.790			
N	81.286	79.525		76.840	76.050	78.034				73.147	76.650					70.750		71.965	
L	82.406	80.531																	
O	81.790	79.181																	
P																			
R	80.215																		
S	76.409	74.327	73.343	72.579	73.672	71.275		70.364	71.163	74.096	70.803		69.434	69.243	70.090		69.059		68.793
SI					56.035														
T											73.109							67.911	

University City Campus (KSK)							
	ELK	MEK	CHK	ELT	MET	CHT	BMT
A	77.568	77.738	76.202	69.229	67.075	64.379	60.661
I	74.516	71.204	72.107	66.436	67.922	58.714	53.140
S	68.560	69.095	68.379				
SI	64.830	62.497					

Faisalabad Campus				
	ELF	MCF	CHF	TXF
A	75.186	73.336	73.722	50.420
I	70.932	64.269		50.660
S	65.134	64.486	66.077	
P	65.106			

Rachna College of Engineering & Technology, Gujranwala				
	ELR	MER	IMR	CSR
A	74.268	75.320	72.500	71.538
I	71.570	70.666	69.405	
S	66.700	68.781		

Narowal Campus			
	ELN	MEN	CIVN
A	73.215	73.656	73.902
I	70.932	69.582	70.715
S	62.780	63.613	63.077
SI			67.118
P		72.25	

## ABBREVIATIONS USED TO READ SEAT ALLOCATION CHART & FINAL MERIT 2016

### LAHORE CAMPUS

1.	Electrical Engineering	ELL
2.	Computer Engineering	CEL
3.	Computer Science	CSC
4.	Mechanical Engineering	MEL
5.	Mechatronics and Control Engineering	MCL
6.	Industrial & Manufacturing Engineering	IML
7.	Architectural Engineering Building	BAE
8.	Civil Engineering	CIV
9.	Environmental Engineering	EEL
10.	Transportation Engineering	TEL
11.	Chemical Engineering	CHL
12.	Geological Engineering	GEE
13.	Metallurgical & Materials Engineering	MME
14.	Mining Engineering	MIN
15.	Petroleum & Gas Engineering	PET
16.	Polymer Engineering	PEL
17.	Architecture	ARC
18.	City and Regional Planning	CRP
19.	Product & Industrial Design	PID

### FAISALABAD CAMPUS

1.	Electrical Engineering	ELF
2.	Mechatronics & Control Engineering	MCF
3.	Chemical Engineering	CHF
4.	Textile Engineering	TXF

### UNIVERSITY CITY CAMPUS (KALA SHAH KAKU)

1.	Electrical Engineering	ELK
2.	Mechanical Engineering	MEK
3.	Chemical Engineering	CHK
4.	Computer Science	CSK
5.	Electrical Engineering Technology	ELT
6.	Mechanical Engineering Technology	MET
7.	Chemical Engineering Technology	CHT
8.	Bio Medical Engineering Technology	BMT

### RACHNA COLLEGE OF ENGINEERING & TECHNOLOGY, GUJRANWALA

1.	Electrical Engineering	ELR
2.	Mechanical Engineering	MER
3.	Industrial & Manufacturing Engineering	IMR
4.	Computer Science	CSR

# SEAT ALLOCATION

Categories/Symbols		FACULTY OF ELEC												FACULTY OF MECH									
		ELL	ELF	ELK	ELR	ELN	CEL	CSL	CSK	CSR	CSN	BMEK	BMEN	MEL	MER	MEN	MCL	MCF	MEK	TXF	IML	IMR	
Open Merit	A	133	80	66	45	42	35	150	100	50	50	49	49	133	42	41	96	86	76	48	43	49	
DAE	I		3	3	1	3						1	1		2	2	2	2	2	1	2	1	
CHILDREN OF ENGINEERS, ARCHITECTS, PLANNERS	N	2												2									
BACKWARD AREAS OF PUNJAB	L	1												1									
CHILDREN OF UNIVERSITY EMPLOYEE *◆	M	OPEN (Upper Limit of 10 seats in major disciplines)																					
CHILDREN OF UNIV ALUMNI	O	1												1									
B.TECH (PASS)	P		1													1							
BHAKKAR & LAYYAH DISTRICTS	R	1																					
CHILDREN OF OVERSEAS PAKISTANISI	S	10	14	17	2	5								15	2	6	2	10	13		3		
CHILDREN OF OVERSEAS PAKISTANISI (DAE)	SI			1														1	1				
Disabled (Punjab Domiciled)	T																						
TABLE FOR RESERVED SEATS																							
SIND <sup>1</sup>	B	1												1									
BALOCHISTAN <sup>2</sup>	C	1	1	1	1					1				1	1								
KPK (KHYBER PAKHTUN KHWA) <sup>1</sup>	D	1				1								1									
AZAD KASHMIR	E	5	1	1	1									5	1				1				
AZAD KASHMIR (Lepa valley)		OPEN																					
NORTHERN AREAS (Gilgit Baltistan)		1		1										1	1		1	1					
FOREIGN COUNTRIES <sup>4</sup> (Without Financial Support)		20												12									
AFGHAN NATIONALS	H		4	6			1							1				4	5		1		
INDIAN HELD KASHMIR <sup>3</sup>		OPEN (Upper Limit of 03 seats in major disciplines)																					
CULTURAL EXCHANGE PROGRAMME		2						4						2									
ARMY	J	3					2							3									
AIR FORCE		1					1																
NAVY							1							1									
FATA	K	2												2	1			1		1	1		
DG KHAN (Tribal Area)	Q	1																	1				
RAJANPUR (Tribal Area)		1													1								
BALOCHISTAN/FATA (HEC SCHOLAR)	U	OPEN (Maximum 04 Seats In Each Discipline)																					
HEC SELF FINANCE SCHEME	SF	10	(Maximum 05 Seats In Each Discipline)											10	(Maximum 05 Seats In Each Discipline)								

# SEAT ALLOCATION

## SEAT ALLOCATION

Categories/Symbols		FACULTY OF CIVIL					FACULTY OF CMM					FACULTY OF E. SC. & ENGG.			FACULTY OF A&P			TOTAL
		CIVL	CIVN	AE	TEL	ENL	CHL	CHF	CHK	PEL	MME	PET	MIN	GEL	ARC	PID	CRP	
Open Merit	A	127	25	39	47	48	64	42	87	46	38	29	34	42	39	48	33	2251
DAE	I		6						3		1	1	2		1			40
CHILDREN OF ENGINEERS, ARCHITECTS, PLANNERS	N	2					1				1	1	1		1		1	12
BACKWARD AREAS OF PUNJAB	L																	2
CHILDREN OF UNIVERSITY EMPLOYEE *•	M	OPEN (Upper Limit of 10 seats in major disciplines)																41
CHILDREN OF UNIV ALUMNI	O																	2
B.TECH (PASS)	P																	2
BHAKKAR & LAYYAH DISTRICTS	R																	1
CHILDREN OF OVERSEAS PAKISTANISI	S	15	9	5	2	2	10	4	4	2	1	2		1	5	2		163
CHILDREN OF OVERSEAS PAKISTANISI (DAE)	SI		1									1						5
Disabled (Punjab Domiciled)	T														1		1	2
Sub Total (i)																		2521
TABLE FOR RESERVED SEATS																		
SIND <sup>1</sup>	B	1					2					2	1	1			1	10
BALUCHISTAN <sup>2</sup>	C	3		1	1		1	1			1	3	2	1	1		1	24
KPK (KHYBER PAKHTUN KHWA) <sup>1</sup>	D	1	1	1			2				2	1	1	2			5	19
AZAD KASHMIR	E	5		1			2	2					2	2			2	31
AZAD KASHMIR (Lepa valley)		OPEN																1
NORTHERN AREAS (Gilgit Baltistan)			1							1			1				1	10
FOREIGN COUNTRIES <sup>4</sup> (Without Financial Support)		21		3			4				3	3			2		3	72
AFGHAN NATIONALS	H	2					1	4	5	1	2	1	5				1	44
INDIAN HELD KASHMIR <sup>3</sup>		OPEN (Upper Limit of 03 seats in major disciplines)																15
CULTURAL EXCHANGE PROGRAMME		1										1						10
ARMY	J	2																10
AIR FORCE																		2
NAVY																		2
FATA	K	4					1		1					1				15
DG KHAN (Tribal Area)	Q	1										1						4
RAJANPUR (Tribal Area)									1									3
BALUCHISTAN/FATA (HEC SCHOLAR)	U	OPEN (Maximum 04 Seats In Each Discipline)																20
HEC SELF FINANCE SCHEME	SF	10	(Maximum 05 Seats In Each Discipline)															50
Sub Total (ii)																		342
GRAND TOTAL (i+ii)																		2863

\* Including one seat for DAE

♦ The allocation is tentative. The final allocation shall be subject to the condition that no more than ten shall be admitted in one discipline

1 Reciprocal Basis

2 Reciprocal Basis / ELL seat reserved for females

3 Out of Fifteen seats (06 Seats reserved in above mentioned disciplines at Main campus and 09 seats open (seats in each campus i.e. KSK, FSD, RCET, NWL))

4 One Seat out of 72 reserved for Sri Lankan Muslim Student in any discipline

Note : a) Seats unavailed by any category shall fall to "A" Category under same terms and conditions as applicable to the former

b) The university reserves the right to make minor changes in seat allocation if deemed necessary.

SEAT ALLOCATION CHART SESSION 2017  
(B.Sc. Engineering Technology-Open Merit)

Categories/Symbols		KSK				TOTAL
		ELT	MET	CHT	BMT	
Open Merit	A	21	21	21	22	85
DAE	I	8	8	8	8	32
CHILDREN OF UNIVERSITY EMPLOYEE	M	As Per Rules				5
TOTAL SEATS		29	29	29	30	121



## IMPORTANT CONTACT INFORMATION

DESIGNATION	OFFICE	E-MAIL
Vice Chancellor	042-99250201	vc@uet.edu.pk
	042-99029205	
(Fax)	042-99250202	
<b>DEANS OF FACULTIES</b>		
Faculty of Electrical Engineering	042-99029234	deanee@uet.edu.pk
Faculty of Mechanical Engineering	042-99029221	deanmech@uet.edu.pk
Faculty of Civil Engineering	042-99029222	deancivil@uet.edu.pk
Faculty of Chemical, Metallurgical & Polymer Engineering	042-99029230	deancmme@uet.edu.pk
Faculty of Earth Sciences	042-99029230	deancmme@uet.edu.pk
Faculty of Architecture & Planning	042-99029250	deanarch@uet.edu.pk
Faculty of Natural Sciences, Humanities and Islamic Studies	042-99029215	deannshis@uet.edu.pk
<b>CHAIRPERSONS OF TEACHING DEPARTMENTS</b>		
Architecture	042-99029223	@uet.edu.pk
Architecture Engineering & Design	042-99029419	@uet.edu.pk
Chemical Engineering	042-99029488	@uet.edu.pk
Chemistry	042-99029239	@uet.edu.pk
City & Regional Planning	042-99029203	@uet.edu.pk
Civil Engineering	042-99029202	@uet.edu.pk
Computer Science & Engineering	042-99029260	@uet.edu.pk
Electrical Engineering	042-99029229	@uet.edu.pk
Institute of Environmental Engg.	042-99029248	@uet.edu.pk
Geological Engineering	042-99029297	@uet.edu.pk
Humanities and Social Science	042-99029493	@uet.edu.pk
Industrial & Manufacturing Engineering	042-99029226	@uet.edu.pk
Islamic Studies	042-99029246	@uet.edu.pk
Mathematics	042-99029210	@uet.edu.pk
Mechanical Engineering	042-99029466	@uet.edu.pk
Mechatronics & Control Engineering	042-99029294	@uet.edu.pk
Metallurgical Engg & Material Science	042-99029207	@uet.edu.pk
Mining Engineering	042-99029212	@uet.edu.pk
Petroleum Engineering	042-99029471	@uet.edu.pk
Physics	042-99029204	@uet.edu.pk
Polymer & Processing Engineering	042-99029505	@uet.edu.pk
Transportation Engineering & Management	042-99029428	@uet.edu.pk



DESIGNATION	OFFICE	E-MAIL
<b>HEADS INSTITUTES &amp; ADMINISTRATIVE DEPARTMENTS</b>		
Chairman Health Committee	042-99029240	
Chairman Placement Bureau	042-99029218	
Chairman Transport Committee	042-99029266	
Chief Medical Officer	042-99029240	
Controller of Examinations	042-99029235	examination@uet.edu.pk
Convenor Admission Committee / Incharge Student Section/	042-99029216	admission@uet.edu.pk
International Students Office	042-99250212	
Director General Research, Innovation & Commercialization	042-99029237	mtahir@uet.edu.pk
Director Studies	042-99029251	
Director Students Affairs	042-99029244	
Focal Person Higher Education Commission	042-99029144	
Chief Librarian	042-99029243	lib@uet.edu.pk
Project Director Building & Works	042-99029238	pd@uet.edu.pk
Public Relation Officer	042-99029358	
Registrar	042-99029227	registrar@uet.edu.pk
Resident Auditor	042-99029232	
Senior Warden	042-99029225	
Treasurer	042-99029233	treasurer@uet.edu.pk

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**NOTE: Application processing and preference fee of RS 500.00 payable at the time of purchase of prospectus.**

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