



# UNIVERSITY OF ENGINEERING & TECHNOLOGY, LAHORE

UNDERGRADUATE  
PROSPECTUS 2023

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### FACULTIES & DEPARTMENT

#### Lahore Campus

Department of Electrical Engineering .....	
Department of Computer Science .....	
Department of Computer Engineering .....	
Department of Mechanical Engineering .....	
Department of Automotive Engineering .....	
Department of Industrial & Manufacturing Engineering .....	
Department of Mechatronics & Control Engineering .....	
Department of Civil Engineering .....	
Department of Architectural Engineering & Design .....	
Department of Transportation Engineering & Management .....	
Institute of Environmental Engineering & Research .....	
Department of Chemical Engineering .....	
Department of Polymer & Process Engineering .....	
Department of Metallurgical & Materials Engineering .....	
Department of Mining Engineering .....	
Department of Geological Engineering .....	
Department of Petroleum & Gas Engineering .....	
Department of Architecture .....	
Department of City & Regional Planning .....	
Department of Product & Industrial Design .....	
Department of Chemistry .....	
Department of Mathematics .....	
Department of Physics .....	
Department of Humanities, Management & Social Sciences .....	
Department of Islamic Studies .....	
Institute of Business and Management .....	

#### KSK Campus

Department of Electrical, Electronics & Telecommunication Engineering .....	
Department of Energy Engineering .....	
Department of Bio-Medical Engineering .....	
Department of Mechanical, Mechatronics & Manufacturing Engineering .....	
Department of Chemical, Polymer & Composite Material Engineering .....	
Department of Food Engineering and Bio-Technology .....	
Department of Basic Sciences and Humanities .....	
Department of Management .....	
Department of Computer .....	

#### Faisalabad Campus

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

#### Rachna Campus

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

#### Narowal Campus

Department of Electrical Engineering .....	
Department of Computer Science and Engineering .....	
Department of Mechanical Engineering .....	
Department of Civil Engineering .....	
Department of Bio-Medical Engineering .....	
Department of Basic Sciences & Humanities .....	

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## **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 technology, in teaching, Innovation and commercialization that is internationally relevant and has a direct bearing on national industrial, technological and socio-economic development.

## CHANCELLOR'S MESSAGE

The University of Engineering and Technology (UET) Lahore holds a place of eminence among the prestigious engineering universities of the world. Being a pioneering institution of engineering and technology in Pakistan, UET has unlocked all its potential in imparting quality education, enabling the students to display scholarly autonomy in learning and research and contribute to sustainable development. The recent QS ranking of UET Lahore in engineering and technology evidently substantiates the competence, commitment, and efforts of the faculty, administration and students. With the largest number of Outcome Based Education (OBE) accredited programs in Pakistan, UET Lahore is also a flag bearer of quality engineering education. HEC research grants and international funding worth hundreds of million of rupees won by the faculty members of UET collaboration aimed

at solving major social, educational and technical problems through research projects. The recent strides and contributions of UET Lahore in digitalizing scientific and technological education in Pakistani universities are highly remarkable. I am confident that UET will keep expanding its horizons through external linkages aimed at improving the quality of research and education at its main campus, sub-campuses and affiliated colleges.



Muhammad Baligh-ur-Rehman  
Governor Punjab  
Chancellor University of Engineering & Technology, Lahore

## VICE CHANCELLOR'S MESSAGE

Despite challenges and difficulties being faced by the administration, a concerted effort, with the help of faculty and staff, is being made to achieve the milestones set for teaching, research, commercialization, entrepreneurship and better learning outcomes in all programs. These efforts have led to improvement in quality of education, services as well as national and international ranking of the University. Moreover, stronger linkages with alumni, industry, Government and international partners are being pursued.

It is a great honor for me to serve my alma mater, UET, which last year celebrated hundred years of excellence in engineering education. The realignment of institute's vision and mission has led to a rapid growth in research, innovation as well as quality education, which are necessary for technological development in the country and ultimately, financial independence.

I congratulate you for choosing UET and accepting the challenge to become a well-rounded individual who has both the advanced knowledge in his field and integrity to lead technological progress and confront societal challenges.



Prof. Dr. Syed Mansoor Sarwar  
Vice Chancellor  
University of Engineering and Technology, Lahore

# UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE

Chancellor

**MUHAMMAD BALIGH-UR-REHMAN**

Governor of Punjab

Vice Chancellor

**PROF. DR. SYED MANSOOR SARWAR**

Registrar

**MUHAMMAD ASIF**

Controller of Examinations

**MUHAMMAD ZARGHAM NUSRAT**

Treasurer

**IMRAN BABAR**

## DEANS OF FACULTIES

Faculty of Electrical Engineering  
**PROF. DR. MUHAMMAD SHOAIB**

Faculty of Mechanical Engineering  
**PROF. DR. NADEEM AHMAD MUFTI**

Faculty of Civil Engineering  
**PROF. DR. HABIB UR REHMAN**

Faculty of Chemical, Metallurgical & Polymer Engineering  
**PROF. DR-ING. NAVEED RAMZAN**

Faculty of Earth Sciences & Engineering  
**PROF. DR. MUHAMMAD ZUBAIR ABU BAKAR**

Faculty of Architecture & Planning  
**PROF. DR. RIZWAN HAMEED**

Faculty of Natural Sciences, Humanities & Islamic Studies  
**PROF. DR. MUHAMMAD SHAHID RAFIQUE**



# CHAIRPERSONS / DIRECTORS OF TEACHING DEPARTMENTS / INSTITUTES

## MAIN CAMPUS

Electrical Engineering <b>PROF. DR. MUHAMMAD TAHIR</b>	Department of Geological Engineering <b>PROF. DR. MUHAMMAD FAROOQ AHMED</b>
Computer Science <b>PROF. DR. MUHAMMAD USMAN GHANI KHAN</b>	Petroleum and Gas Engineering <b>PROF. DR. M. KHURRAM ZAHOOR</b>
Computer Engineering <b>PROF. DR. ALI HAMMAD AKBAR</b>	Metallurgical & Materials Engineering <b>PROF. DR. FURQAN AHMED</b>
Mechanical Engineering <b>PROF. DR. NASIR HAYAT</b>	Architecture <b>DR. MUNAZZA AKHTAR</b>
Industrial & Manufacturing Engineering <b>PROF. DR. MUHAMMAD QAISER SALEEM</b>	Product & Industrial Design <b>DR. ATIF BILAL ASLAM</b>
Mechatronics & Control Engineering <b>DR. ALI RAZA</b>	City & Regional Planning <b>PROF. DR. SHAKER MAHMOOD MAYO</b>
Civil Engineering <b>PROF. DR. KHALID FAROOQ</b>	Physics <b>PROF. DR. ANWAR LATIF</b>
Institute of Environmental Engineering & Research <b>PROF. DR. AMIR IKHLAQ</b>	Chemistry <b>PROF. DR. FARHAT YASMEEN</b>
Architectural Engineering & Design <b>PROF. DR. SAJJAD MUBIN</b>	Mathematics <b>PROF. DR. MUHAMMAD MUSHTAQ</b>
Transportation Engineering & Management <b>PROF. DR. AMMAD HASSAN KHAN</b>	Humanities & Social Sciences <b>DR. MEHVISH RIAZ</b>
Chemical Engineering <b>PROF. DR. SAIMA YASIN</b>	Islamic Studies <b>PROF. DR. HAFIZ MUHAMMAD SHAHBAZ</b>
Polymer & Process Engineering <b>PROF. DR. ASIF ALI QAISER</b>	Institute of Business and Management <b>DR. MUHAMMAD NASIR MALIK</b>
Department of Mining Engineering <b>DR. SHAHAB SAQIB</b>	

## NEW CAMPUS (KSK)

Chemical, Polymer & Process Engineering <b>PROF. DR. TANVEER IQBAL</b>
Mechanical, Mechatronics and Manufacturing Engineering <b>PROF. DR. SHAHID IMRAN</b>
Basic Sciences & Humanities <b>DR. KASHIF REHAN</b>
Computer Sciences <b>PROF. DR. HAFIZ M. SHAHZAD ASIF</b>
Bio-Medical Engineering <b>DR. NIDA IQBAL</b>
Electrical, Electronics and Telecommunication Engineering <b>DR. MUHAMMAD ALI</b>
Energy Engineering Department <b>DR. HASAN ERTEZA GELANI</b> (Teacher Incharge)

## FAISALABAD CAMPUS

Chemical, Polymer & Process Engineering <b>PROF. DR. SYED WAQAS AHMAD</b>
Textile Engineering <b>PROF. DR. MUHAMMAD MOHSIN</b>
Mechatronics & Control Engineering. <b>PROF. DR. HASSAN IJAZ</b>
Electrical, Electronics and Telecommunication Engineering <b>DR. MUHAMMAD AKRAM</b>
Basic Sciences & Humanities <b>DR. SAJJAD AHMAD</b>

## RCET, GUJRANWALA

Electrical Engineering <b>DR. HAROON FAROOQ</b>
Mechanical Engineering <b>DR. MUHAMMAD SALMAN ABBASI</b>
Basic Sciences and Humanities <b>DR. ADNAN ASLAM</b>
Computer Sciences <b>DR. ABDUL JALEEL</b>

## NAROWAL CAMPUS

Electrical Engineering <b>DR. WAQAS TARIQ TOOR</b>
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## HEADS OF NON-TEACHING DEPARTMENTS

Director Research, Innovation and Commercialization

**DR. MUHAMMAD AZEEM RAZA**

Director Studies

**PROF. DR. AMMAD HASSAN KHAN**

Senior Warden

**PROF. DR. MUHAMMAD MUSHTAQ**

Convener Admission Committee / In-charge Students Section

**DR. ASIM LOAN**

Focal Person Higher Education Commission

**DR. MUHAMMAD AZEEM RAZA**

Chairman Health Committee

**PROF. DR. KASHIF JAVED**

Chairman Transport Committee

**PROF. DR. ZIA-UR-REHMAN**

Chairman Library Committee

**PROF. DR. ASADULLAH QAZI**

Chairman Proctorial Board

**PROF. DR. MUHAMMAD SHOAB**

Chairman Sports Committee

**PROF. DR. SHAKER MAHMOOD MAYO**

Director Repair and Maintenance Centre

**PROF. DR. WAQAR MAHMOOD**

Director Automotive Engineering Centre

**PROF. DR. ASAD NAEEM SHAH**

Director Students Affairs

**PROF. DR. ASIF ALI QAISER**

Coordinator International Students Office

**DR. AMNA NIAZI**

Director Students Financial Aid & Career Services

**DR. MUHAMMAD USMAN GHANI KHAN**

Director, Al-Khawarizmi Institute of Computer Sciences

**PROF. DR. WAQAR MAHMOOD**

Director Planning and Development

**DR. QASIM MANZOOR**

Project Director Lahore Campus

**ENGR. ASAD MASOOD**

Project Director University Main Campus

**ENGR. AWAIS MALIK**

Project Director Faisalabad Campus

**ENGR. AWAIS MALIK**

Resident Officer

**MUHAMMAD ASIF**

Resident Auditor

**DR. ZUBAIR FAROOQ**

Public Relations Officer

**Ms. SHAHIDA NAZEER**

Director Quality Enhancement Cell

**DR. FARHAN MAHMOOD**

# ACADEMIC CALENDAR (2023-2024)

<b>Fall Semester</b>	
Semester Starts	Monday, September 04, 2023
Semester Ends (after 16 weeks)	Friday, December 22, 2023
Examination period	Tuesday, December 26, 2023 to Friday, January 05, 2024
Semester Break	Monday, January 08, 2024 to Friday, January 12, 2024
Deadline for Submission of Results	Friday, January 12, 2024

<b>Spring Semester</b>	
Semester Starts	Monday, January 15, 2024
Semester Ends (after 16 weeks)	Friday, May 03, 2024
Examination period	Monday, May 06, 2024 to Friday, May 17, 2024
Deadline for Submission of Results	Friday, May 24, 2024

<b>Summer Semester (Optional)</b>	
Semester Starts	Monday, June 24, 2024
Semester Ends (after 8 weeks of study)	Friday, August 16, 2024
Examination Period	Monday, August 19, 2024 to Friday, August 23, 2024
Deadline for Submission of Results	Friday, August 30, 2024

# THE UNIVERSITY

Though this institution received its charter as a University in the year 1961, it has a much longer history as a distinguished seat of learning in engineering sciences. The institute started its operation 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 almost a century. At that time, 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 time of Independence, i.e., 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, it started a Bachelor's degree course in Mining Engineering, the first-ever of its kind in the country. 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 Master's degree courses in diverse specializations of engineering, architecture, planning and allied disciplines. Ph.D. degree 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 student's enrollment in seventies. Consequently, the University College of Engineering was established in 1975 at Sahiwal. For three years it functioned at Sahiwal and was shifted to its present campus at Taxila in 1978. Subsequently, this college was upgraded to a university and it is currently functioning as 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, now called Office of Research, Innovation and Commercialization (ORIC), 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 13,163. Currently, 2,527 students are pursuing postgraduate studies. The number of female students enrolling for different disciplines is ever on the increase and is 3,462 at present. The number of foreign students coming from countries, like Iran, Jordan, Kuwait, Kenya, Nepal, Saudi Arabia, Iraq, Bangladesh, Yemen, Somalia, Nigeria, Ethiopia and Sri Lanka is over 479 which gives the University Campus a cosmopolitan character.

The university has 766 teachers of which 382 have a Ph.D. degree, whereas 101 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's 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 with it for award of degrees.

# DEGREE PROGRAMS OFFERED AT UET

## 1. Degree Programs at Main Campus

- i. Bachelor of Science (B.Sc.) degree is offered in the following disciplines:
  - a) Architectural Engineering
  - b) Automotive Engineering
  - c) Chemical Engineering
  - d) Civil Engineering
  - e) City and Regional Planning
  - f) Computer Engineering
  - g) Computer Science
  - h) Electrical Engineering
  - i) Environmental Engineering
  - j) Geological Engineering
  - k) Industrial and Manufacturing Engineering
  - l) Mechanical Engineering
  - m) Mechatronics and Control Engineering
  - n) Metallurgical and Materials Engineering
  - o) Mining Engineering
  - p) Petroleum and Gas Engineering
  - q) Polymer Engineering
  - r) Transportation Engineering
- ii. Bachelor's degree is offered in the following disciplines:
  - a) Architecture
  - b) Business Administration
  - c) Business and Information Technology
  - d) Product and Industrial Design
- iii. Bachelor of Science (B.S.) degree is offered in the following disciplines:
  - a) Environmental Science
  - b) Chemistry
  - c) Mathematics
  - d) Physics

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

- i. Bachelor of Science (B.Sc.) degree is offered in the following disciplines:
  - a) Biomedical Engineering
  - b) Computer Science
  - c) Chemical Engineering
  - d) Electrical Engineering
  - e) Environmental Science
  - f) Mechanical Engineering
  - g) Software Engineering
  - h) Energy Systems Engineering
  - i) Energy Systems and Management
  - j) Food Science and Bio-Technology
- ii. Bachelor's degree is offered in the following discipline:
  - a) Business Administration
- iii. Bachelor of Science (B.S.) degree is offered in the following disciplines:
  - a) Chemistry
  - b) Mathematics
  - c) Physics

## 3. Degree Programs at Faisalabad Campus

- i. Bachelor of Science (B.Sc.) degree is offered in the following disciplines:
  - a) Chemical Engineering
  - b) Electrical Engineering
  - c) Mechatronics & Control Engineering
  - d) Textile Engineering
  - e) Computer Science
- ii. Bachelor's degree is offered in the following discipline:
  - a) Business Administration
- iii. Bachelor of Science (B.S.) degree is offered in the following disciplines:
  - a) Chemistry
  - b) Mathematics

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

- i. Bachelor of Science (B.Sc.) degree is offered in the following disciplines:
  - a) Computer Science
  - b) Electrical Engineering
  - c) Industrial & Manufacturing Engineering
  - d) Mechanical Engineering
- ii. Bachelor's degree is offered in the following discipline:
  - a) Business Administration
- iii. Bachelor of Science (B.S.) degree is offered in the following disciplines:
  - a) Mathematics

## 5. Degree Programs at Narowal Campus

- i. Bachelor of Science (B.Sc.) degree is offered in the following disciplines:
  - a) Biomedical Engineering
  - b) Civil Engineering
  - c) Computer Science
  - d) Electrical Engineering
  - e) Mechanical Engineering
- ii. Bachelor's degree is offered in the following discipline:
  - a) Business Administration
- iii. Bachelor of Science (B.S.) degree is offered in the following disciplines:
  - a) Mathematics
  - b) Physics

## AFFILIATED INSTITUTIONS AND PROGRAMS OFFERED

<p>1. NFC Institute of Engineering and Fertilizer Research Faisalabad</p> <ul style="list-style-type: none"> <li>a) Bachelor of Business Administration</li> <li>b) B.Sc. Civil Engineering</li> <li>c) B.Sc. (Hons) Computer Science</li> <li>d) B.Sc. Chemical Engineering</li> <li>e) B.Sc. Electrical Engineering</li> <li>f) B.Sc. Mechanical Engineering</li> <li>g) B.Sc. Civil Engineering Technology</li> <li>h) B.Sc. Electrical Engineering Technology</li> <li>i) B.Sc. Mechanical Engineering Technology</li> <li>j) M. Sc Chemical Engineering</li> </ul> <p>2. Government College of Technology, Railway Road, Lahore</p> <ul style="list-style-type: none"> <li>a) B.Sc. Mechanical Engineering Technology</li> </ul> <p>3. Government College of Technology, Faisalabad</p> <ul style="list-style-type: none"> <li>a) B.Sc. Electrical Engineering Technology</li> </ul> <p>4. Sharif College of Engineering &amp; Technology, Raiwind Road, Lahore</p> <ul style="list-style-type: none"> <li>a) B.Sc. Chemical Engineering</li> <li>b) B.Sc. (Hons) Computer Science</li> <li>c) B.Sc. Electrical Engineering</li> </ul> <p>5. Dr. A. Q. Khan Institute of Technology, Mianwali</p> <ul style="list-style-type: none"> <li>a) B.Sc. Civil Engineering Technology</li> <li>b) B.Sc. Electrical Engineering Technology</li> <li>c) B.Sc. Mechanical Engineering Technology</li> </ul>	<p>6. Quaid-e-Azam College of Engineering and Technology, Sahiwal</p> <ul style="list-style-type: none"> <li>a) B.Sc. Civil Engineering</li> <li>b) B.Sc. Electrical Engineering</li> <li>c) B.Sc. Mechanical Engineering</li> <li>d) B.Sc. Civil Engineering Technology</li> <li>e) B.Sc. Electrical Engineering Technology</li> <li>f) B.Sc. Mechanical Engineering Technology</li> </ul> <p>7. Swedish College of Engineering &amp; Technology Rahim Yar Khan</p> <ul style="list-style-type: none"> <li>a) B.Sc. Civil Engineering</li> <li>b) B.Sc. Mechanical Engineering</li> </ul> <p>8. Sir Syed College of Computer Science, Gulberg, Lahore</p> <ul style="list-style-type: none"> <li>a) B.Sc.(Hons) Computer Science</li> </ul> <p>9. Government Swedish Pakistani College of Technology, Gujrat</p> <ul style="list-style-type: none"> <li>a) B.Sc. Mechanical Engineering Technology</li> </ul> <p>10. Grafton College, Islamabad</p> <ul style="list-style-type: none"> <li>a) B.Sc. (Hons) Computer Science</li> <li>b) B.Sc. Electrical Engineering</li> </ul>
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## **UNDERGRADUATE ADMISSION PROCESS SCHEDULE 2023** **FOR PROGRAMS THAT DO NOT REQUIRE ECAT**

Event	Date	Day
Availability of Undergraduate Prospectus	Available under "Downloads" at: <a href="https://admission.uet.edu.pk">https://admission.uet.edu.pk</a>	
On-line Filling and Submission of Admission Forms Starts	16-01-2023	Monday
Last date of On-Line Submission of Admission Forms	02-05-2023	Tuesday
Hafiz-e-Quran Test                      Reporting Time 10:00 am	03-05-2023	Wednesday
Sports Test                                      Reporting Time 10:00 am	04-05-2023	Thursday
Announcement of 1 <sup>st</sup> Merit List (Evening)	05-05-2023	Friday
Last Date of Depositing Dues and Documents for 1 <sup>st</sup> Merit List	11-05-2023	Thursday
Announcement of 2 <sup>nd</sup> Merit List (Evening)	12-05-2023	Friday
Last Date of Depositing Dues and Documents for 2 <sup>nd</sup> Merit List	17-05-2023	Wednesday
Announcement of 3 <sup>rd</sup> Merit List (Evening)	18-05-2023	Thursday
Last Date of Depositing Dues and Documents for 3 <sup>rd</sup> Merit List	22-05-2023	Monday
Announcement of 4 <sup>th</sup> Merit List (Evening)	23-05-2023	Tuesday
Last Date of Depositing Dues and Documents for 4 <sup>th</sup> Merit List	25-05-2023	Thursday
Hostel Allotment Starts	03-09-2023	Sunday
<b>Regular Classes Commence</b>	<b>04-09-2023</b>	<b>Monday</b>
Allocation of Registration Numbers in Respective Departments	04-09-2023	Monday

## UNDERGRADUATE ADMISSION PROCESS SCHEDULE 2023 FOR PROGRAMS THAT REQUIRE ECAT

Event	Date	Day
Availability of Undergraduate Prospectus	Available under "Downloads" at: <a href="https://admission.uet.edu.pk">https://admission.uet.edu.pk</a>	
On-line Filling and Submission of Admission Forms Starts	27-03-2023	Monday
Last date of On-Line Submission of Admission Forms	02-05-2023	Tuesday
Hafiz-e-Quran Test                      Reporting Time 10:00 am	03-05-2023	Wednesday
Sports Test                                      Reporting Time 10:00 am	04-05-2023	Thursday
Announcement of 1 <sup>st</sup> Merit List (Evening)	05-05-2023	Friday
Last Date of Depositing Dues and Documents for 1 <sup>st</sup> Merit List	11-05-2023	Thursday
Announcement of 2 <sup>nd</sup> Merit List (Evening)	12-05-2023	Friday
Last Date of Depositing Dues and Documents for 2 <sup>nd</sup> Merit List	17-05-2023	Wednesday
Announcement of 3 <sup>rd</sup> Merit List (Evening)	18-05-2023	Thursday
Last Date of Depositing Dues and Documents for 3 <sup>rd</sup> Merit List	22-05-2023	Monday
Announcement of 4 <sup>th</sup> Merit List (Evening)	23-05-2023	Tuesday
Last Date of Depositing Dues and Documents for 4 <sup>th</sup> Merit List	25-05-2023	Thursday
Hostel Allotment Starts	03-09-2023	Sunday
<b>Regular Classes Commence</b>	<b>04-09-2023</b>	<b>Monday</b>
Allocation of Registration Numbers in Respective Departments	04-09-2023	Monday



# ADMISSION ELIGIBILITY AND REGULATIONS

## 1. GENERAL INSTRUCTIONS

- Members of the University staff will be available for personal consultation during admission period.
- Try to submit the application as early as possible. Do not wait for the last date.
- As soon as the process of selection is complete, the merit list shall be notified showing the percentage aggregate marks of the applicants admitted in different disciplines against different categories.

## 2. REQUIRED SUBJECT COMBINATIONS AND EQUIVALENCE

2.1 Candidates having either one of the following subject combinations in their intermediate or equivalent are eligible to apply for admission in programs listed alongside each combination:

Subject Combinations in Intermediate / equivalent qualification	Programs for which Eligible
Mathematics, Physics, Chemistry	All programs offered at UET
Mathematics, Physics, Computer Science	Computer Science, Computer Engineering, Software Engineering, Architecture, City and Regional Planning (CRP), Product and Industrial Design (PID), Mathematics, Physics, BBA, BBIT, Energy Systems and Management
Mathematics, Physics, Statistics	Architecture, City and Regional Planning (CRP), Product and Industrial Design (PID), Mathematics, Physics, BBA, BBIT, Energy Systems and Management
Biology, Physics, Chemistry	Biomedical Engineering, Chemistry, Physics, Environmental Science, Food Science and Technology, BBA, BBIT, Energy Systems and Management
Intermediate or equivalent subject combinations other than the above	BBA, BBIT

The University recognizes the following examinations as equivalent to the Intermediate in subject combinations listed above:

- Intermediate Examination of the Board of Intermediate & Secondary Education, Azad Kashmir.
- Intermediate Examination of the Aga Khan University Examination Board.
- Intermediate Examination of a Higher Education Commission (HEC) recognized / approved institution.
- Equivalent examinations of non-Pakistani Boards.

## 2.2 Equivalence Certificates for Examinations Conducted by Non-Pakistani Boards

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's degree course offered by the University must fulfill the following requirements:

- i. He should have earned at least 60% marks in Intermediate / DAE or equivalent foreign qualification examination excluding sports and Hafiz-e-Quran marks.
- ii. He should have appeared and passed the Entry Test by securing at least 33%, arranged by this University for that academic session in which he seeks admission. His subject combination in the Entrance Test must be same as his intermediate (or equivalent) subject combination because he will be considered for admission in the prescribed disciplines relevant to his subject combination only. This restriction does not apply to DAE qualified candidates.
- iii. In case the candidate seeks admission based on B.Sc. Engineering Technology or equivalent degree, he should have obtained (or expect to obtain) at least 60% marks, in case of annual system, or a CGPA of 2.5 out of 4.0, in case of semester system.
- iv. He should be a bonafide resident of the area from where he seeks admission.
- v. He should meet standards of physique and eyesight laid down in the medical certificate.

### 3.2 Other Eligibility Requirements

- i. 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. Software Engineering*, Bachelor's Degrees in Architecture and Product & Industrial Design, B.S. in Chemistry, Mathematics and Physics must 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.
- ii. Intermediate or an equivalent examination with Physics, Mathematics and Computer Science shall be acceptable only for Computer Science, Computer Engineering, Software Engineering, City & Regional Planning (CRP), Architecture, Product & Industrial Design, Mathematics, Physics, BBA and BBIT.
- iii. Intermediate or an equivalent examination with Physics, Mathematics and Statistics shall be acceptable only for admission in City & Regional Planning (CRP), Architecture, Product & Industrial Design, Mathematics, Physics, BBA and BBIT.
- iv. Intermediate (Pre-Medical) or an equivalent examination with Physics, Biology and Chemistry shall be acceptable only for admission in Biomedical Engineering, Chemistry, Physics, Environmental Science, Food Science and Technology, BBA and BBIT programs.
- v. Candidate with B.Sc. Engineering Technology or equivalent degrees should have his degree relevant to the branch of engineering, as prescribed by the university, in which he seeks admission.
- vi. 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.
- vii. Candidates with Intermediate or equivalent qualification in subject combinations/ qualification other than those listed above are only eligible to apply in BBA and BBIT programs.

### 3.3 Diploma Holders

- i. Candidates with a Diploma of Associate Engineer should have passed diploma examination of a Board of Technical Education in the relevant technology.
- ii. Candidates with a Diploma of Associate Engineer shall not be eligible unless their diplomas are in the relevant technology as specified against each degree course given below (the following list may be amended from time to time depending on notifications of Pakistan Engineering Council (PEC)):

- i. **B.Sc. Electrical Engineering**
- Diploma in Electrical Technology
  - Diploma in Telecommunication Technology
  - Diploma in Electronics Technology
  - Diploma in Avionics Technology
  - Diploma in Instrumentation Technology
  - Diploma in Information Technology
  - Diploma in Precision Mechanical & Instrument Technology
  - Diploma in Radar Technology
  - Diploma in Automation Technology
  - Diploma in Radio Technology
  - Diploma in Instrumentation & Process Control Technology
  - Diploma in Mechatronics
  - Diploma in Computer/ Computer Information Technology
- ii. **B.Sc. Computer Engineering**
- Diploma in Computer Information Technology
  - Diploma in Computer Technology
  - Diploma in Telecommunication Technology
  - Diploma in Electrical Technology
  - Diploma in Electronics Technology
  - Diploma in Software Technology
  - Diploma in Radar Technology
  - Diploma in Automation Technology
  - Diploma in Radio Technology
  - Diploma in Instrumentation Technology
  - Diploma in Instrumentation & Process Control Technology
- iii. **B.Sc. Computer Science**
- Diploma in Computer Information Technology
  - Diploma in Computer Technology
  - Diploma in Information Technology
  - Diploma in Software Technology
  - Diploma in Electrical Technology
  - Diploma in Mechanical Technology
  - Diploma in Civil Technology
  - Diploma in Electronics Technology
  - Diploma in Biomedical Technology
  - Diploma in Automation Technology
  - Diploma in Radio Technology
  - Diploma in Radar Technology
  - Diploma in Instruments Technology
  - Diploma in Instrumentation & Process Control Technology
  - Diploma in Telecommunication Technology
- iv. **B.Sc. Biomedical Engineering**
- Diploma in Biomedical Technology
  - Diploma in Electrical Technology
  - Diploma in Electronics Technology
  - Diploma in Instrumentation Technology
  - Diploma in Radar Technology
  - Diploma in Automation Technology
  - Diploma in Radio Technology
  - Diploma in Instrumentation & Process Control Technology
  - Diploma in Healthcare Technology
  - Diploma in Mechatronics
- v. **B.Sc. Mechanical Engineering**
- Diploma in Mechanical Technology
  - Diploma in Precision Mechanical & Instruments Technology
  - Diploma in Auto & Diesel Technology
  - Diploma in Bio-Medical Technology
  - Diploma in Dies & Mould Technology
  - Diploma in Automation Technology
  - Diploma in Refrigeration & Air Conditioning Technology
  - Diploma in Aerospace Technology
  - Diploma in Mechatronics Technology
  - Diploma in Mechanical Technology with any specialization
  - Diploma in Vacuum Technology
- vi. **B.Sc. Industrial and Manufacturing Engineering**
- Diploma in Mechanical Technology
  - Diploma in Cast Metal & Foundry Technology
  - Diploma in Mechanical (Production) Technology
  - Diploma in Auto & Diesel Technology.
  - Diploma in Automation Technology
  - Diploma in Mechanical (Construction Machinery) Technology
  - Diploma in Chemical Technology
  - Diploma in Dies and Mold Technology
  - Diploma in Glass, Ceramics and Pottery Development Technology
  - Diploma in Vacuum Technology
  - Diploma in Mechatronics Technology
  - Diploma in Mechanical Technology with any specialization
- vii. **B.Sc. Mechatronics and Control Engineering**
- Diploma in Instruments Technology
  - Diploma in Electrical Technology
  - Diploma in Electronics Technology
  - Diploma in Mechanical Technology
  - Diploma in Radar Technology
  - Diploma in Automation Technology
  - Diploma in Radio Technology
  - Diploma in Instrumentation & Process Control Technology
  - Diploma in Mechatronics Technology
  - Diploma in Mechanical Technology with any specialization

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| <p>viii. <b>B.Sc. Textile Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Textile Technology</li> <li>b) Diploma in Spinning Technology</li> <li>c) Diploma in Textile Weaving Technology</li> <li>d) Diploma in Textile Dying and Printing Technology</li> <li>e) Diploma in Garments Technology</li> <li>f) Diploma in Dress Designing &amp; Making / Fashion Design</li> <li>g) Diploma in Automation Technology</li> <li>h) Diploma in Printing and Graphics Arts</li> <li>i) Diploma in Chemical Technology</li> <li>j) Diploma in Leather Technology</li> </ul> | <p>xiii. <b>B.Sc. Metallurgical and Materials Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Metallurgy &amp; Welding Technology</li> <li>b) Diploma in Foundry and Pattern Making Technology</li> <li>c) Diploma in Mechanical Technology</li> <li>d) Diploma in Cast Metal &amp; Foundry Technology</li> <li>e) Diploma in Mechanical Technology with any specialization</li> <li>f) Diploma in Glass, Ceramics and Pottery Development</li> </ul> |
| <p>ix. <b>B.Sc. Civil Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Civil Technology</li> <li>b) Diploma in Land &amp; Mine Surveying Technology</li> <li>c) Diploma in Architecture Technology</li> <li>d) Diploma in Environmental Technology</li> <li>e) Diploma in Civil Technology with any Specialization</li> </ul>  | <p>xiv. <b>B.Sc. Polymer and Process Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Chemical Technology</li> <li>b) Diploma in Chemical Processing Technology</li> <li>c) Diploma in Chemical Technology with any specialization</li> <li>d) Diploma in Petro Chemical Technology</li> <li>e) Diploma in Petroleum Technology</li> </ul>   |
| <p>x. <b>B.Sc. Architectural Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Civil Technology</li> <li>b) Diploma in Architecture Technology</li> <li>c) Diploma in Construction Technology</li> </ul>  | <p>xv. <b>B.Sc. Petroleum &amp; Gas Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Petroleum Technology</li> <li>b) Diploma in Chemical Technology</li> <li>c) Diploma in Petrochemical Technology</li> </ul>  |
| <p>xi. <b>B.Sc. Transportation Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Civil Technology</li> </ul>  | <p>xvi. <b>B.Sc. Mining Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Land and Mine Surveying Technology</li> <li>b) Diploma in Mining Technology</li> </ul>  |
| <p>xii. <b>B.Sc. Chemical Engineering</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Chemical Technology</li> <li>b) Diploma in Chemical Processing Technology</li> <li>c) Diploma in Chemical Technology (specialization in Sugar Technology)</li> <li>d) Diploma in Petro Chemical Technology</li> <li>e) Diploma in Petroleum Technology</li> <li>f) Diploma in Leather Technology</li> <li>g) Diploma in Footwear Technology</li> <li>h) Diploma in Glass, Ceramics and Pottery Development</li> <li>i) Diploma in Chemical Technology with any specialization</li> </ul>    | <p>xvii. <b>B. Architecture</b></p> <ul style="list-style-type: none"> <li>a) Diploma in Architecture</li> <li>b) Diploma in Civil Technology</li> <li>c) Diploma in Land and Mine Surveying Technology</li> </ul>   |
|  | <p>xviii. <b>B. Product and Industrial Design</b></p> <p>All Technologies are eligible to apply</p>  |
|  | <p>xix. <b>B. S. Chemistry, Mathematics and Physics</b></p> <p>All Technologies are eligible to apply</p>  |
|  | <p>xx. <b>B. Sc. Energy Systems and Management</b></p> <p>All Relevant Technologies are eligible to apply</p>  |

### 3.4 Seats for B.Sc. Engineering Technology or Equivalent Degree Holders

Applicants seeking admission against seats reserved for the holders of B.Sc. Engineering Technology or equivalent degrees shall be eligible if their degrees are in the relevant technology as specified against each degree course given below. Relevancy of the technology, with changed nomenclature, will be acceptable subject to the approval of the concerned Dean:

- a) **Electrical Engineering**  
Electrical Technology, Electrical Engineering Technology, Electronics Technology
- b) **Biomedical Engineering**  
Biomedical Technology, Biomedical Engineering Technology
- c) **Civil Engineering**  
Civil Technology, Civil Engineering Technology

- d) **Textile Engineering**  
Textile Technology, Textile Engineering Technology
- e) **Mechanical Engineering**  
Mechanical Technology, Mechanical Engineering Technology, Industrial Technology, Industrial Engineering Technology, Mechatronics Technology, Mechatronics Engineering Technology
- f) **Industrial and Manufacturing Engineering**  
Mechanical Technology, Mechanical Engineering Technology, Industrial Technology, Industrial Engineering Technology, Mechatronics Technology, Mechatronics Engineering Technology
- g) **Chemical Engineering**  
Chemical Technology, Chemical Engineering Technology, Polymer Technology, Polymer Engineering Technology, Material Technology, Material Engineering Technology

#### 4. **CONDITIONAL ADMISSION TO CANDIDATES**

Since admission will be offered before declaration of the Intermediate Examination Part-II (or Equivalent) result, the following condition will apply:

- Admission of candidates, who are unable to earn 60% or above in their B.Sc. Engineering Technology degree or Intermediate and equivalent qualification (such as A-level equivalence by IBCC) or DAE, will be cancelled and their dues will be reimbursed in full without deduction.

#### 5. **AGE LIMIT AND GENDER**

There is no age restriction for seeking admission to any bachelor's degree course at the University. Male, female and transgender persons are eligible to apply for all seats.

## DETERMINATION OF MERIT

### 1. EXAMINATIONS CONSIDERED FOR MERIT PURPOSE

For admission to bachelor's degree courses, except BBA, BBIT, Chemistry, Environmental Science, Food Science and Technology, Energy Systems and Management, Mathematics and Physics programs, in determination of merit the following examinations are considered:

- a) Intermediate examination or equivalent with the following combinations: Mathematics, Physics, Chemistry or Mathematics, Physics, Computer Science or Mathematics, Physics, Statistics or Physics, Chemistry, Biology
- b) Matric examination
- c) Diploma of Associate Engineer or B.Sc. Engineering Technology or equivalent
- d) Entrance Test

1.1 For admission to bachelor's degree courses in Business (i.e., BBA and BBIT), Chemistry, Environmental Science, Food Science and Technology, Energy Systems and Management, Mathematics and Physics programs, merit will be determined by the following:

- a) Intermediate examination or equivalent of all combinations
- b) Matric examination
- c) Diploma of Associate Engineer or B.Sc. Engineering Technology or equivalent

### 2.0 MERIT DETERMINATION

The comparative merit of applicants in programs that require ECAT will be determined on the basis of overall adjusted admission marks obtained by them in the examinations stated above:

- In case of Intermediate stream:
  - a) Entrance Test (ET) Percentage Marks: 33% weight in merit aggregate.
  - b) First Year Percentage Marks: 50% weight in merit aggregate.
  - c) Matric Percentage Marks: 17% weight in merit aggregate.
- In case of diploma holders:
  - a) ET Percentage Marks: 33% weight in merit aggregate.
  - b) Sum of First- and Second-Years Percentage Marks: 67% weight in merit aggregate.
- In case of B.Sc. Engineering Technology or equivalent degree holders:
  - a) ET Percentage Marks: 33% weight in merit aggregate.
  - b) 7 semesters CGPA if degree is not yet complete: 67% weight in merit aggregate.
- In case of foreign qualification:
  - a) ET Percentage Marks: 33% weight in merit aggregate.
  - b) Marks earned in 11<sup>th</sup> Class ("O" level or equivalent): 67% weight in merit aggregate.
- ET is required for admission in the following programs, however, passing the test has been waived-off:
  - B.Sc. in City and Regional Planning, B.Sc. in Computer Science, B.Sc. in Software Engineering, Bachelors in Architecture and Bachelors in Product and Industrial Design.
  - The merit will be determined by the results in the matric, first-year intermediate (or equivalent) examinations and ET with 25%, 45% and 30% weights, respectively. The intermediate or equivalent examination criterion is the same as in (b) in the above cases.
- ET is not required for admission in the following programs:
  - a) Bachelors in Business Administration, Bachelors in Business and Information Technology, Bachelors in Environmental Science, B.S. in Chemistry, B.S. in Mathematics, B.S. in Physics, B.Sc. Energy Systems and Management and B.Sc. in Food Science and Technology.

- b) The merit will be determined by the results in the matric and first-year intermediate (or equivalent) examinations with 25% and 75% weights, respectively. The intermediate or equivalent examination criterion is the same as in (b) in the above cases.

**Notes:**

- a) *In case the candidate has already completed his/her intermediate or equivalent qualification, their Part-I result would be used in computation of Aggregate.*
- b) *In case of foreign qualification, letter grade will be converted to marks by IBCC formula. IBCC equivalent certificate is required to be submitted after admission.*
- c) *In case of B.Sc. Engineering. Technology degree holders, CGPA of 2.5 out of 4.0 would be treated as 60% and CGPA of 4.0 out of 4.0 would be treated as 90%. Other CGPAs would be interpolated accordingly.*
- d) *All candidates, with the exception of DAE qualified candidates, who has appeared in a particular subject combination in the Entrance test will only be considered for admission in the prescribed disciplines relevant to the subject combination.*

**3.0 MERIT OF INTERMEDIATE (PRE-MEDICAL) WITH MATHEMATICS**

In determining the merit of an applicant having Intermediate (Pre-Medical) with mathematics as an additional subject, the marks obtained in first year biology course will be used as long as the applicant gets a passing grade in the mathematics subject.

**4.0 CREDIT FOR HAFIZ-E-QURAN**

A Hafiz -e-Quran is given additional marks in determination of merit. He will get the benefit only if he has:

- a) Checked the box provided in the on-line application form and
- b) Appeared before the “verification committee”, appointed by the Vice Chancellor for oral test, which can award marks, between zero to twenty, according to the degree of his proficiency.

The "Verification Committee" will hold oral test at 10:00 am in UET Lahore on Wednesday, May 03, 2023 at 10:00 am. It may be noted that no separate call letters will be issued to the concerned applicants in this connection.

**5.0 CREDIT FOR SPORTS**

- a) A maximum of ten marks will be added to the academic marks in Intermediate or equivalent examination of an applicant who is a sportsman. He will get the benefit only if he has:
  - a) Checked the box provided in the on-line application form; and
  - b) Appeared before the “verification committee”, appointed by the Vice-Chancellor, , which 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 hold sports test at 10:00 am in UET Lahore on Thursday, May 04, 2023 at 10:00 am. It may be noted that no separate call letters will be issued to the concerned applicants in this connection.



**6.0 DETERMINATION OF MERIT IN CASE OF EQUAL PERCENTAGE OF ADMISSION MARKS**

If two or more applicants have equal percentage of admission marks (up to four 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 four 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.

**7.0 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 in the group is prepared. The applicants belonging to a category thus compete for admission amongst themselves for the seats allocated to it.

**8.0 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.

**9.0 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.

**10.0 UN-UTILIZED SEATS**

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

**APPLICATION CATEGORIES AND SYMBOLS**

Category	Description	How to Apply?
<b>A1</b> [Open Merit Seats (subsidized)]	Only Punjab domiciled candidates, having requisite qualification (including DAE), can apply for open merit seats under 'A1' category. <b>Tuition fee is subsidized.</b>	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>A1-Med</b> [Open Merit Seats (subsidized)]	Only Punjab domiciled candidates, having Intermediate (Pre-Medical) qualification can apply for open merit seats under 'A1-Med' category. <b>Tuition fee is subsidized.</b>	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>A2</b> [Open Merit Seats (partially- subsidized)]	Only Punjab domiciled candidates, having requisite qualification (including DAE), can apply for open merit seats under 'A2' category. <b>Tuition fee is partially subsidized and there is no provision for financial assistance.</b>	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>A2-Med</b> [Open Merit Seats (partially- subsidized)]	Only Punjab domiciled candidates, having Intermediate (Pre-Medical) qualification can apply for open merit seats under 'A1-Med' category. <b>Tuition fee is partially subsidized and there is no provision for financial assistance.</b>	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> [Sindh]	The candidate should be a bonafide resident of the Sindh province. Diploma holders are also eligible to apply. <b>Tuition fee is subsidized.</b>	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> [Baluchistan]	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> [KPK]	The candidate should be a bonafide resident of the Khyber Pakhtunkhwa (KPK) province. Diploma holders may also apply. <b>Tuition fee is subsidized.</b>	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.
<b>E1</b> [Azad Kashmir]	The candidate should be a national of Azad Kashmir. <b>Tuition fee is subsidized.</b>	The applications are to be submitted to the Secretary Nomination Board, Azad Government of the State Jamu & Kashmir, Education Secretariat (Colleges), New Secretariat Chatter, Muzaffarabad Azad Kashmir.
<b>E1</b> [Azad Kashmir (Lipa Valley)]	The candidate should be a national of Lipa Valley, Azad Kashmir. <b>Tuition fee is subsidized.</b>	The applications are to be submitted to the Secretary Nomination Board, Government of the State of Azad Jamu & Kashmir, Education Secretariat (Colleges), New Secretariat, Chatter, Muzaffarabad, Azad Kashmir.
<b>E2</b> [Northern Areas]	The candidate should be a bonafide resident of Northern Areas (Gilgit-Baltistan) <b>Tuition fee is subsidized.</b>	The applications are to be submitted to the Secretary Nomination Board/Director of Education, Gilgit-Baltistan. Diploma holders are also eligible to apply.

<p><b>H1</b> [Foreign Countries]</p>	<p>The candidates having a 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. <b>Tuition fee is subsidized.</b></p>	<p>The application is sent in triplicate to the Ministry of Finance, Revenue, Economic Affairs, Statistics &amp; 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 &amp; Privatization (Economic Affairs Division) Government of Pakistan, Islamabad.</p>
<p><b>H2</b> [Afghan Nationals]</p>	<p>The candidates should be an Afghan national. The applicant is required to get his application sponsored by his government. <b>Tuition fee is paid by the sponsor.</b></p>	<p>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.</p>
<p><b>H3</b> [Indian Held Kashmir]</p>	<p>The candidates from Indian Held Kashmir can also apply under 'H' Category. <b>Tuition fee is paid by the sponsor.</b></p>	<p>The application is sent in triplicate to the Ministry of Finance, Revenue, Economic Affairs, Statistics &amp; 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 &amp; Privatization (Economic Affairs Division) Government of Pakistan, Islamabad.</p>
<p><b>H4</b> [Cultural Exchange]</p>	<p>The candidates having a 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. <b>Tuition fee is subsidized.</b></p>	<p>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.</p>
<p><b>H5</b> [Sri Lanka Nationals]</p>	<p>The candidates from Sri Lanka can also apply under this Category. <b>Tuition fee is paid by the sponsor.</b></p>	<p>Applications are received by Project Director (Sri Lanka-Afghanistan Project), Higher Education Commission, H-9, Islamabad. Selected candidates are nominated by the Higher Education Commission of Pakistan.</p>
<p><b>J1</b> [Armed Forces]</p>	<p>The children of non-commissioned and junior commissioned officers / non-gazetted officials belonging to Army, Air Force or Navy can apply under this category. Diploma holders are also eligible to apply. <b>Tuition fee is subsidized.</b></p>	<p>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:</p> <ul style="list-style-type: none"> <li>• <b>For Army Seats</b> The Adjutant General, AG'S Branch (W &amp; R Directorate), General Headquarter, Rawalpindi</li> <li>• <b>For Air Force Seats</b> The Deputy Director Education (TRG), Air Headquarter, Peshawar</li> <li>• <b>For Navy Seats</b> The Director, Directorate of Naval Educational Services, Naval Headquarter, Islamabad</li> </ul>
<p><b>J2</b> [Armed Forces]</p>	<p>The children of commissioned officers/ gazette officials belonging to Army, Air Force or Navy can apply under this category. Diploma holders are also eligible to apply. <b>Tuition fee is partially subsidized.</b></p>	<p>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:</p> <ul style="list-style-type: none"> <li>• <b>For Army Seats</b></li> </ul>

		<p>The Adjutant General, AG'S Branch (W &amp; R Directorate), General Headquarter, Rawalpindi</p> <ul style="list-style-type: none"> <li>• <b>For Air Force Seats</b> The Deputy Director Education (TRG), Air Headquarter, Peshawar</li> <li>• <b>For Navy Seats</b> The Director, Directorate of Naval Educational Services, Naval Headquarter, Islamabad</li> </ul>
<b>K</b> [FATA]	The applicant should be a bonafide resident of the erstwhile 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.
<b>L</b> [South, Central and North Punjab]	The applicant should be a bonafide resident of any of the following districts: Bahawalnagar, Bahawalpur, Rahim Yar Khan, Rajanpur, Muzaffargarh, Jhang, Attock, Chakwal, Mianwali, Dera Ghazi Khan and Jhelum. <b>Tuition fee is subsidized.</b>	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.
<b>M</b> [UET Employees]	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 Intermediate. (Pre-Engineering). For inclusion in this category the applicant's parent has to fulfill the conditions regarding University service given in Form F-V. <b>Tuition fee is subsidized.</b>	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 F-V and a certificate of being unmarried by a class-I gazetted officer or a University class-A officer on Form F-VI. The selection and allocation of disciplines are made by the University according to merit. <b>Note:</b> 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.
<b>N</b> [Engineers]	The Punjab domiciled children of Engineers, Architects and Town Planners can apply under this category. Diploma holders cannot apply. <b>Tuition fee is partially subsidized.</b>	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 along with PEC/PCATP registration. Other qualifications such as AMIE (Pak) are not recognized for inclusion in this category.
<b>NM</b> [Non-Muslims]	Only Punjab domiciled candidates, having requisite qualification (including DAE), can apply for seats for religious minorities under 'NM' category. <b>Tuition fee is partially subsidized.</b>	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>O</b> [Alumni]	The Punjab domiciled children of Alumni of UET Lahore can apply under this category. Diploma holders cannot apply. <b>Tuition fee is partially subsidized.</b>	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 PEC/PCATP registration and 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.
<b>P</b> [B.Tech.]	The applicant should be a bonafide resident of Punjab and should have passed B.Sc. Engineering Technology or equivalent degree from an HEC recognized university of Pakistan. <b>Tuition Fee is subsidized.</b>	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.
<b>Q</b> [DGK and Rajanpur]	The applicant should be a bonafide resident of the Tribal Areas of D.G. Khan and Rajanpur. Diploma holders are not eligible to apply. <b>Tuition fee is subsidized.</b>	Applications are submitted to the DCO of respective district. Nominations are made by the DCOs on merit.
<b>R</b> [Layyah and Bhakkar]	The applicant should be a bonafide resident of Layyah and Bhakkar districts. <b>Tuition fee is subsidized.</b>	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.
<b>S</b> [Overseas]	The children of overseas Pakistanis, having requisite qualification can apply under 'S' category.  Orphan candidates meeting eligibility requirements may be sponsored by their real brother, real maternal or real paternal uncle.  <b>Tuition fee is partially subsidized and there is no provision for financial assistance in this category.</b>	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: i. A certificate on Form F-VIII regarding his parent's employment in a foreign country issued by the Pakistani embassy in that country ii. A photocopy of his parent's resident visa for that country attested by the Pakistani Embassy 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. <i>Scanned / faxed copy of employment certificate and visa shall not be entertained.</i>
<b>SF</b> [Self Finance for Foreign and Dual Nationals]	Foreigners and Dual Nationals, having requisite qualification, can apply under this category. <b>Tuition Fee is subsidized.</b>	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. The applicant should have appeared in SAT-1. Moreover, if the applicant is interested in applying under other categories then he needs to appear in ECAT too.
<b>T</b> [Disabled]	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.
<b>U1</b>	These seats are for students of Baluchistan, under	Applications are received by Project Director (BAL-FATA Project),

<i>[Bal-FATA]</i>	project provision of "Higher Education Opportunities for Students of FATA and Baluchistan".	Higher Education Commission, H-9, Islamabad. Selected candidates are nominated by the Higher Education Commission of Pakistan.
<b>U2</b> <i>[Bal-FATA]</i>	These seats are for students of 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.

## APPLICATION FILLING AND SUBMISSION

### 1. CORRECTNESS OF INFORMATION ON THE APPLICATION FORM

It is your responsibility to enter correct information while filling the online application. In case of deliberate concealment of information or misinformation, admission, if offered, will be liable to be cancelled and the candidate will be placed in the HEC blacklist through public notification and will become ineligible to apply in any HEC institution.

### 2. GETTING THE ADMISSION CODE ONLINE

You may get the Admission Code online:

- Login to the admission portal <https://admission.uet.edu.pk>
- Select “**Purchase Online Token...**” button on the admission portal.
- You will be asked to enter your name, father’s name and CNIC number.
- A challan number will be generated. You may pay the application fee using this number online using one of the following options:

#### 2.1 Payment through HBL/ Konnect APP

- Login to the Konnect mobile application and tap the” **LIFESTYLE**” button.
- Select “**EDUCATION**” option.
- Tap on “**SCHOOL FEE**”.
- A list of institutions will appear. Select **UET Lahore** and enter Challan Number.
- After verifying your name, make the payment.
- Now you may use this paid Challan Number as your Admission Code.

#### 2.2 Payment through HBL Online Banking (For HBL Account Holders only)

- Login to the HBL online banking application on your computer or mobile if you have access to a HBL account.
- Select “**MORE**” option.
- Select “**EDUCATION**” under Bill Payment category.
- A list of institutions will appear. Select **UET Lahore** and enter Challan Number.
- After verifying your name, make the payment.
- Now you may use this paid Challan Number as your Admission Code.

### 3. INSTRUCTIONS FOR FILLING THE ONLINE APPLICATION FORM

- You will fill the admission application form by logging into <https://admission.uet.edu.pk>
- You will be asked to enter the following information:
  - Entry Test Roll Number
  - Date of Birth
  - CNIC Number
  - Verification Code
- On the next screen, you will see your personal information, which you entered while submitting the Entry Test Form.
- In case you are applying based on Intermediate Part-I examination, you will be required to:
  - Enter the name of Board of Intermediate and Secondary Education (BISE) and your registration number in Matriculation examination and Intermediate Part-I examination.
  - Enter your obtained and total marks in Intermediate Part-I examination.
  - Enter your obtained and total marks in Matriculation examination.
- In case you are applying based on DAE examination, you will be required to:



- i. Enter the name of Board of Technical Education and your registration number in first year and second year DAE examinations.
  - ii. Enter the name of your diploma.
  - iii. Enter your obtained and total marks in first year DAE.
  - iv. Enter your obtained and total marks in second year DAE.
- f) In case you are applying based on “O” level or equivalent foreign examination, you will be required to:
- i. Enter your candidate number in the “O” level examination.
  - ii. Enter the IBCC equivalence certificate number and date issued (if available).
  - iii. Enter your obtained and total marks as indicated on the IBCC equivalent certificate.
  - iv. If you do not have an IBCC equivalence certificate, you may visit the IBCC website and enter the marks according to IBCC formulas. Kindly note that original IBCC equivalence certificate will be required from admitted candidates.
- g) In case you are applying based on B.Sc. Engineering Technology or equivalent qualification, you will be required to:
- i. Enter the name of your degree and name of the university.
  - ii. Enter your obtained and total CGPA. If you have earned percentage marks, you may enter the obtained and total marks up to seventh semester of education.
- h) Next you will be asked if you are claiming to be a hafiz-e-Qura’an or a sports person. In case you claim to be one or both, separate admit cards for Hafiz-e-Qura’an and sports person tests will be available to you for printing. You will report for the said tests on the dates and locations printed on the admit cards.
- i) Next you will choose your preferences for programs/ disciplines, campuses and categories.
- j) **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.
  - 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.
  - Candidates must note that after the display of merit list, no application would be entertained for moving to a lower merit preference.
- k) Muslim candidates will be asked to check the box on the Finality of Prophethood declaration form.
- l) You will scan and upload the following documents:
- a. Applicable result on the basis of which you are applying, that is, Intermediate Part-I result card or DAE first and second years result card or “O” level/ IBCC equivalent result or B.Tech. or equivalent transcript for seven semesters.
  - b. Domicile certificate.
- m) Once your application is complete, you will be asked to submit it. After submission, your application is final and submitted in university’s records. You may print a copy for your own record.

## PROCEDURE FOR THE SELECTED CANDIDATES

### 1. NOTIFICATION OF SELECTION

A list of selected candidates will be displayed on the University notice boards and on the UET admission portal <https://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 website and on the notice boards.

**IMPORTANT:**

#### a) 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 cancelled.

#### b) Admission made as a result of an error, omission or mistake shall not confer any right on an applicant.

### 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 <https://admission.uet.edu.pk> to the Deputy Registrar, Students Section:

- a) Paid Original Bank Challan as proof of payment of dues. Online payment facility is available through Habib Bank Limited (HBL) internet banking/ Mobile application, HBL Konnect and ATMs. Candidate must keep photocopies of this challan/ proof of payment for his/her own record and for submission to the department.
- b) One set of photocopies of each educational document including domicile.
- c) Original applicable certificates and degree, like Matric/O-Level, Intermediate./ "A"-Level, Diploma of Associate Engineer (DAE), B.Sc. Engineering Technology or any equivalent qualifications.
- d) Six copies of the most recent passport size photograph
- e) Two attested copies of CNIC/ "B" Form.
- f) Bio-data card Form-I duly completed in all respects.
- g) Medical Certificate Form-II duly signed and stamped by Medical Practitioner registered with PMC.
- h) Duly attested Current Income certificate of the parent/ guardian.
- i) Undertaking (Sample Form –VII) on a Rs. 100/- judicial paper duly completed.

#### 2.1 Additional Documents for Specific Categories

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 and PEC/PCATP registration of applicant's father or mother
Category O	Attested photocopy of the degree issued by UET Lahore and PEC/PCATP registration of applicant's father or mother
Category S	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. <i>Scanned / faxed copy of employment certificate and visa shall not be entertained.</i>

## 2.2 For Punjab Domiciled Applicants Who Possess Qualifications from Outside Punjab

Applicants for categories A1, A2, 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 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 their B.Sc. Engineering Technology or equivalent degree other than the University of Engineering and Technology, Lahore, 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 -V from the head of his Department affirming that he is a permanent resident of the Punjab. It shall be necessary in such cases that the period of the applicant's study corresponds with the period of the posting of the parent in that province.

### b) 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 A1 or A2, 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 must submit the following additional documents

- i. An attested Photocopy of father's/mother's domicile certificate of the Punjab Province or the Federal Capital area, Islamabad
- ii. Documentary proof in the form of a certificate on Form -VI 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
- iii. An attested photocopy of the relevant page of the electoral rolls on which the name of the father/mother of the applicant appears
- iv. An attested photocopy of the identity card of the applicant's father/mother
- v. An undertaking from the candidate on Form-VII

### d) Applicant whose father is not alive

In case his father is not alive, and the above documents cannot be produced, the applicant should submit:

- i. Documentary proof of his father's death
- ii. Documentary evidence of his parent's immovable property in Punjab or Federal Capital Area, Islamabad

## 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 -VII.

**7. DEADLINE FOR ADMISSION**

Admission shall be closed after the expiry of thirty days from the commencement or registration of the first-year class.

**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, E1, E2, H1, H2, H3, H4, H5, J1, J2, K, Q, U1 & U2**

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. CONDITIONAL ADMISSION TO CANDIDATES**

Since admission will be offered before declaration of the Intermediate Examination Part-II (or Equivalent) result, the following condition will apply:

- Admission of candidates, who are unable to earn 60% or above in their B.Sc. Engineering Technology degree or Intermediate and equivalent qualification (such as A-level equivalence by IBCC) or DAE, will be cancelled and their dues will be reimbursed in full without deduction.

**10. HOSTEL ACCOMMODATION**

- a) Hostel accommodation is limited and is provided on the basis of merit. Local students are not eligible to apply.
- b) 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).
- c) The candidate selected for admission at Kala Shah Kaku campus, Faisalabad Campus and Narowal Campus should apply to Hostel Warden of the respective campus for hostel accommodation.
- d) 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



## DEPARTMENT OF ELECTRICAL ENGINEERING

### Dean

Prof. Dr. Muhammad Shoaib

### Chairman

Prof. Dr. Muhammad Tahir

### Professor Emeritus

Dr. Karam Elahi Durrani  
Dr. Shahid Hussain Bokhari  
Dr. Haroon Atique Babri

### Professors

Dr. Muhammad Asghar Saqib  
Dr. Kashif Javed

### Associate Professors

Dr. Asim Loan  
Dr. Irfan Ullah Chaudhary  
Dr. Umar Tabrez Shami  
Dr. Syed Abdul Rahman Kashif  
Dr. Farhan Mahmood  
Dr. Rabia Nazir  
Dr. Ahsan Tahir  
Dr. Haq Nawaz  
Dr. Ubaid Ullah Fayyaz

### Assistant Professors

Dr. Nauman Ahmed  
Dr. Syed Shah Irfan Hussain  
Dr. Naveed Nawaz  
Mr. Arslan Abdul Rahim

Mr. Muhammad Bilal

Dr. Adeem Aslam  
Dr. Muhammad Salman Fakhar  
Dr. Suleman Sami Qazi  
Dr. M. Muzammal Rafique  
Dr. Imran Javeed  
Dr. Farooq Ahmad

### Lecturers

Mr. Muhammad Anique Aslam  
Ms. Noor ul Ain  
Mr. Omar Imtiaz  
Mr. Umar Shahid  
Mr. Rehan Naeem  
Mr. Khalid Butt

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 centre of excellence in the field of electrical engineering.

### Program Educational objectives (PEOs)

**PEO-01:** Graduate should acquire and demonstrate their proficiency of electrical engineering knowledge by inculcating analysis and design skills using modern tools.

**PEO-02:** Graduate should possess the knowledge translation ability and contribute as an effective team member to reinforce their engineering competency.

**PEO-03:** Graduates should acquire strong moral values, ethical values, interpersonal and project management skills.

**PEO-04:** Graduates should build entrepreneurial and innovative mindset to address real world problems.

### Courses of Study

The Department offers the following programs:

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

### Laboratories and Other Facilities

The Department has the following well-equipped Laboratories:

- Power Systems
- Final Year Project Design
- Control Systems
- Electrical Machines
- Makers Lab
- Supcon Automation
- Computer Systems
- System Simulation
- Power Electronics
- Analog and Digital Electronics
- Wireless Communications
- Microwave Engineering
- Electric Machine Drives
- Artificial Intelligence
- Power Systems Research
- ZTE GSM-BSS
- Communication Systems
- Basic Electrical Engineering
- Product Research
- Applied Electricity
- High Voltage Engineering
- Advance Machines

Department has highly qualified and experienced faculty with most of the Ph.D. faculty members qualified from reputed national and international universities. Research work being carried out at the Department, has direct bearing on the needs of national industry. Faculty members and postgraduate students are engaged in research and publish papers in national and international journals and conferences. Many faculty members have won research grants from HEC and ICT R&D funds.

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

Year 1							
Semester 1			Semester 2				
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
PHY-123	Mechanics and Wave Motion	3	1	PHY-132	Electricity and Magnetism	3	1
ME-238	Thermodynamics	2	1	MA-224	Multivariate Calculus	3	0
IS-101	Islamic and Pakistan Studies/Ethics	3	0	EE-100	Electric Circuits	3	1
MA-123	Calculus	3	0	EE-133	Programming Fundamentals	3	1
EE-132	Introduction to Computing and Data Science	3	1	EE-101	Electrical and Electronics Workshop	0	1
HU-111	Communication Skills	0	1	MA-229	Ordinary Differential Equations	2	0
				QT-101	Translation of the Holy Quran - I	1	0
Year 2							
Semester 3			Semester 4				
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
EE-110	Circuit Analysis and Design	3	1	EE-216	Electronic Devices and Circuits	3	1
EE-250	Electric Machinery Fundamentals	3	1	EE-220	Signals and Systems	3	0
HU-221	Technical Writing and Presentation Skills	3	0	EE-272	Digital Systems	3	1
MA-234	Linear Algebra	3	0	EE-302	Applied Probability	3	0
EE-233	Discrete Mathematics	2	0	EE-234	Data Structures and Algorithms	2	1
ME-100L	Workshop Practice	0	1	HU-1xx	International Language	0	1
				QT-201	Translation of the Holy Quran - II	1	0
Year 3							
Semester 5			Semester 6				
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
EE-273	Microprocessor Systems	3	1	EE-312 / EE-439	Power Electronics*/Introduction to Machine Learning	3	0
EE-356	Power Transmission, Distribution and Utilization	3	0	EE-451 / EE-384	Power System Analysis and Design/Digital Signal Processing	3	1
EE-322	Analog and Digital Communications	3	1	EE-452 / EE-475/EE-486	Renewable Electrical Energy Systems / Computer Architecture* / Microwave and Antenna Engineering*	3	0
EE-384	Electromagnetics and Its Applications	3	0	EE-340	Control Systems	3	1
XYZ	Non-Engineering Elective	3	0	QT-301	Translation of the Holy Quran - III	1	0
				MGT-428	Professional Ethics	3	0
Year 4							
Semester 7			Semester 8				
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
EE-453 / EE-432	Power System Operation and Control/Computer Networks	3	1	EE-450/EE-431/EE-411/ EE-419	High Voltage Engineering/Operating System/Industrial Control Systems/Electrical Instruments and Measurements	3	1
EE-454 / EE-476	Power System Protection/Introduction to VLSI Systems	3	1	EE-456 / EE-425 / EE-414	Introduction to Smart Grids/Wireless Communication*/Integrated Electronic Circuits*	3	0
IS-201	Islamic and Pakistan Studies-II/Ethics	3	0	MGT	Management Elective II	3	0
MGT	Management Elective I	3	0	QT-401	Translation of the Holy Quran - IV	1	0
EE-499a	Project (Phase-I)	0	3	EE-499b	Project (Phase II)	0	3





## DEPARTMENT OF COMPUTER SCIENCE

### Dean

Prof. Dr. Muhammad Shoab

### Chairman

Prof. Dr. Usman Ghani Khan

### Professors

Dr. Shazia Arshad  
Dr. Muhammad Aslam

### Associate Professors

Dr. Muhammad Junaid Arshad  
Dr. Tauqir Ahmad  
Dr. Amjad Farooq  
Dr. Muhammad Awais Hassan

### Assistant Professors

Dr. Talha Waheed  
Dr. Syed Khaldoon Khurshid  
Dr. Amna Zafar  
Dr. Sadaf Hina  
Dr. Ayesha Altaf  
Dr. Faiza Iqbal

### Lecturers

Mr. Atif Hussain  
Mr. Samyan Wahla  
Ms. Farheen Ramzan  
Ms. Abqa Javed  
Ms. Maida Shahid  
Mr. Nazeef Ul Haq  
Mr. Muhammad Laeeq uz Zaman Khan Niazi  
Mr. Syed Tehseen ul Hasan Shah  
Mr. Waqas Ali

### Introduction

The Department of Computer Science is one of the prominent and oldest centers of computer education in the country. Its history dates back to 1968 when UET Lahore established a Computer Center under the supervision of Department of Mathematics. The center was equipped with a contemporary IBM-1130 third generation batch processing computing system that was equipped with a disk drive, monitor and printer. The center was responsible for teaching of courses in Computer Science and Numerical Analysis, which formed an integral part of the curricula for all disciplines of B.Sc. Engineering degrees offered by UET. The center also offered short term computer courses for private and public sector organizations. A Bachelor degree program in Computer Science was started in 1976. The course was upgraded to M.Sc. Computer Science in 1978, that was the first graduate program of the country in computer science. The computer center became an independent Department of Computer Science in 1991. A four years degree program, B.Sc. (Hons.) Computer Science, was introduced by the Department in 1999. Since September 2003 the department renamed the degree as B.Sc. Computer Science. The department also offers graduate degree

of M.S. Computer Science since 2003, whereas Ph.D. Computer Science program was launched in 2002. (The details about these programs are available in graduate prospectus of UET.) The Department holds an endowment chair given by Sultan of Oman, His Majesty Sultan Qaboos Bin Said-Al-Said.

### Mission

To impart high quality computing education to the students, in order to develop critical thinking, analytical skills and abilities to solve real-world problems; for the technological and socio-economic development.

### Degree Program

The department is offering 4 years B.Sc. Computer Science program where students can opt for general CS electives or do specialization in Data Science, Artificial Intelligence, or Cyber Security. The B.Sc. Computer Science program is accredited by National Computing Education Accreditation Council (NCEAC). A minimum of 135 credit hours are required for the completion of the program.

### Program Educational Objectives (PEOs)

**PEO-01:** Graduates demonstrate theoretical and practical knowledge and skills of computer science, to solve real-world complex problems.

**PEO-02:** Graduates demonstrate professionalism, leadership qualities and engage in continuous learning of new developments in diverse fields of computing.

**PEO-03:** Graduates communicate effectively, work in a multidisciplinary team environment and exhibit an awareness of the professional and social responsibility, by making an impact on the society in an ethical manner.

### Facilities

With expansion in academic programs, there are four computer laboratories in the Department. These laboratories are equipped with 160 latest fully networked computers with state-of-the-art servers. In addition, the Department has a FYP Lab. 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.

Department's computing facilities are linked with UET Research Center, Main Library and other teaching departments through a fiber optic backbone. Multimedia projectors are installed in the class rooms and high speed internet facility is available in all laboratories. Department's class rooms are located in a purposely-built adjacent building known as New Lecture Theaters.



**B.Sc. Computer Science**

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
CS-161	Programming Fundamentals	3	1	CS-162	Object Oriented Programming (CS-161)	3	1
CS-102	Introduction to Computing	3	1	CMPE-222	Digital Logic Design (PHY-111)	3	1
HU-102	Functional English	3	0	HU-240	Psychology	3	0
MA-123	Calculus	3	0	HU-111	Communication Skills (Lab)	0	1
PHY-111	Applied Physics	2	1	MA-224	Multivariable Calculus (MA-123)	3	0
ME-100L	Workshop Practice	0	1	MA-343	Applied Probability & Statistics	3	0
				QT-101	Translation of the Holy Quran	1	0
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
CS-261	Data Structures and Algorithms (CS-162)	3	1	CS-262	Database Systems (CS-261)	3	1
HU-221	Technical writing and Presentation Skills	3	0	CS-263	Operating Systems (CS-261)	3	1
CS-271	Computer Organization and Assembly Language (CMPE-222, CS-161)	3	1	MA-228	Differential Equations (MA-224)	3	0
MA-234	Linear Algebra	3	0	CS-272	Design and Analysis of Algorithms (CS-261)	3	0
CS-270	Discrete Mathematics	3	0	CS-273	Theory of Automata (CS-270)	3	0
				QT-201	Translation of the Holy Quran	1	0
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
CS-364	Information Security (CS-270)	3	0	CS-373	Computer Networks (CS-263)	3	1
CS-371	Artificial Intelligence (CS-261)	3	1	CS-39x	Computer Science Elective-2	3	0
CS-301	Professional Practices in Software Development	3	0	CS-39x	Computer Science Elective-3	3	0
CS-39x	Computer Science Elective-1	3	0	CS-380	Graph Theory (CS-270)	3	0
CS-165	Software Engineering	3	1	CS-372	Parallel and Distributed Computing (CS-263)	3	0
				QT-301	Translation of the Holy Quran	1	0
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
CS-465	Final Year Project-I	0	3	CS-466	Final Year Project-II (CS-465)	0	3
CS-471	Compiler Construction (CS-261, CS-273)	3	1	MGT-414	Entrepreneurship & Business Management	3	0
CS-49x	Computer Science Elective-4	3	0	IS-201	Islamic & Pakistan Studies-II	3	0
IS-101	Islamic & Pakistan Studies-I	3	0	HU-xxx	International Language	0	0
CS-49x	Computer Science Elective-5	3	0	MGT-424	Leadership Strategies	3	0
				QT-401	Translation of the Holy Quran	1	0

Elective Courses (3-0, Cr Hrs, if not specified)	
Course No	Subject
CS-351	Computer Graphics
CS-353	Management Information Systems
CS-381	Computer Architecture
CS-382	Operations Research
CS-383	Simulation and Modelling
CS-386	Database Administration
CS-387	Database Performance & Optimization
CS-388	Database Backup & Recovery
CS-389	Distributed Databases
CS-390	System Programming
CS-391	Web Technologies
CS-392	Game Development
CS-393	Open Source Software Development
CS-394	Mobile Application Development
CS-396	Object Oriented Analysis and Design
CS-397	Design Patterns
CS-445	Programming Languages
CS-481	Real Time Systems
CS-487	Ethical Hacking
CS-488	Information Retrieval
CS-491	Wireless Networks
CS-492	Internetworking with Unix TCP/IP
CS-493	Enterprise Application Development
CS-494	E-Commerce
CS-495	Software Design & Architecture
CS-496	Linux Kernel Implementation
CS-497	Intro to Program Analysis
CS-498	Formal Methods
CS-581	Graph Databases
CS-582	Web semantics
CS-583	Leading Software Teams
CS-584	Habits of Highly Effective Software Engineer
CS-585	Personal, Team and Executive Software Processes
CS-586	Logical Paradigms of Computing
SWE-211	Software Requirements Engineering
SWE-221	Human Computer Interaction
SWE-325	UX/UI Design
SWE-331	Software Quality Engineering
SWE-332	Software Measurement & Metrics
SWE-441	Software Project Management
SWE-442	Software Re-Engineering
CS-360	Fundamentals of Cyber Security (Cyber Security Elective)
CS-361	Network Security (Cyber Security Elective)
CS-362	Digital Forensics (Cyber Security Elective)
CS-363	Information Assurance (Cyber Security Elective)
CS-365	Malware Analysis and Development (Cyber Security Elective)

CS-366	Penetration Testing (Cyber Security Elective)
CS-367	Secure Software Design and Development (Cyber Security Elective)
CS-368	Vulnerability Assessment and Reverse Engineering (Cyber Security Elective)
CS-384	Introduction to Data Science (Data Science Elective)
CS-385	Internet of Things (Data Science Elective)
CS-399	Statistics for Data Science (Data Science Elective)
CS-482	Big Data Analytics (Data Science Elective)
CS-483	Cloud Computing (Data Science Elective)
CS-484	Data Warehousing and Business Intelligence (Data Science Elective)
CS-496	Data Visualization (Data Science Elective)
CS-354	Natural Language Processing (AI Elective)
CS-355	Data Mining (2-1) (Data Science Elective, AI Elective)
CS-356	Programming for AI (2-1) (AI Elective)
CS-357	Knowledge Representation and Reasoning (AI Elective)
CS-358	Philosophical Foundations of AI (AI Elective)
CS-450	Agent Based Modeling (AI Elective)
CS-451	Introduction to Bioinformatics (2-1) (AI Elective)
CS-452	Introduction to Deep Learning (AI Elective)
CS-485	Computer Vision and Image Processing (2-1) (AI Elective)
CS-489	Machine Learning (2-1) (AI Elective)
CS-490	Soft Computing (AI Elective)







## DEPARTMENT OF COMPUTER ENGINEERING

<b>Dean</b> Prof. Dr. Muhammad Shoaib	<b>Associate Professors</b> Dr. Yasir Saleem Dr. Muhammad Faisal Hayat	<b>Lecturers</b> Ms. Sahar Waqar
<b>Chairman</b> Prof. Dr. Ali Hammad Akbar	<b>Assistant Professors</b> Dr. Tania Habib Dr. Asim Rehmat Dr. Fareed Ud Din Mehmood Jafri Dr. Beenish Ayesha Akram	<b>Teaching Fellow</b> Mr. Mudasir Dilawar Mr. Raja Muzammil Muneer Ms. Bakhtawar BintAmjad
<b>Professor Emeritus</b> Dr. Mohammad Ali Maud	<b>Professors</b> Dr. Ali Hammad Akbar	

### Introduction

The University of Engineering and Technology Lahore (UET) is the pioneer institute that started computing education at the undergraduate level in the country. A four years degree program as B.Sc. (Hons) in Computer Science and Engineering was initiated in 2001. For students enrolling from September 2003 onwards, this B.Sc. program was renamed and modified into four years B.Sc. Computer Engineering (CE) program. CE program is accredited by Pakistan Engineering Council (PEC) since its inception till date. The CE department was established as a separate entity in 2020.

Our graduates are employed in international organizations such as Microsoft Bing, Google, Amazon, ORACLE, IBM and Sales Force. Our graduates have a good job market share in local industry such as Techlogix, Powersoft19, Netsol, I2C, Xavor, Mentor Graphics, I2C, Systems etc. Many of them are entrepreneurs of organization at National and International levels.

**Mission**

To disseminate computing education emphasizing entrepreneurship and ethical standards while encouraging the students to familiarize with latest developments in research, tools and processes and use their skills to identify and find solution to society's problems.

**Courses of Study**

- a) B.Sc. Computer Engineering

**Postgraduate Programs**

- a) M.Sc. Computer Engineering
- b) Ph.D. Computer Engineering

**Program Educational Objectives (PEOs)**

**PEO-01:** Graduates will be able to excel in careers with enhancement in their knowledge and skills as researchers, system engineers, services engineers and entrepreneurs.

**PEO-02:** Graduates will be effective in society and diverse professional environments maintaining high standards of ethics.

**PEO-03:** Graduates will be able to communicate effectively, demonstrate leadership qualities and professional integrity.

**Laboratories**

- Industrial Automation
- Embedded Systems Design
- Electronics Systems
- Computer
- Project
- Postgraduate research

**B.Sc. Computer Engineering**

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
PHY-123	Mechanics and Waves Motion	3	1	PHY-132	Electricity and Magnetism	3	1
HU-102	Functional English	3	0	MA-224	Multivariate Calculus	3	0
ME-100	Workshop Practice	0	1	CMPE-121	Circuit Analysis	3	1
LIS-101	Islamic & Pakistan Studies-I	3	0	MA-229	Ordinary Differential Equations	2	0
MA-123	Calculus - Single Variable	3	0	CMPE-112	Fundamentals of Programming & Data Science	3	1
CMPE-111	Introduction to Computing	3	1	HU-XXX	International Language	0	0
QT-101	Translation of the Holy Quran-I	1	0				
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
CMPE-221	Circuits and Electronic Devices	3	1	MA-234	Linear Algebra	3	0
CMPE-222	Digital Logic Design	3	1	CMPE-271	Signals and Systems	3	0
HU-111	Communication Skills	0	1	CMPE-223	Computer Organization	3	1
CMPE-211	Object Oriented Programming	3	1	CMPE-252	Probability and Random Variables	3	0
CMPE-251	Discrete Mathematical Structures	3	0	CMPE-212	Data Structures and Algorithms	3	1
QT-201	Translation of the Holy Quran-II	1	0				
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
HU-221	Technical Writing and Presentation Skills	3	0	MGT-410	Project Management	3	0
CMPE-331	Operating Systems	3	1	CMPE-333	Computer Networks	3	1
CMPE-311	Software Engineering	3	1	CMPE-371	Digital Signal Processing	3	1
CMPE-341	Artificial Intelligence	3	1	CMPE-321	Embedded Systems	3	1
CMPE-332	Database Systems	3	1	IME-262	Machine Design & CAD	3	1
				QT-301	Translation of the Holy Quran-III	1	0
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
MGT-414	Entrepreneurship and Business Management	3	0	IS-201	Islamic & Pakistan Studies-II	3	0
CMPE-421	Computer Architecture	2	1	CMPE-492	Final Year Project II	0	3
CMPE-491	Final Year Project I	0	3	CMPE-4XX	Computer Engineering Elective III	3	0
CMPE-4XX	Computer Engineering Elective	3	0	CMPE-4XX	Computer Engineering Elective IV	3	0
CMPE-4XX	Computer Engineering Elective	3	0	QT-401	Translation of the Holy Quran-IV	1	0



## DEPARTMENT OF MECHANICAL ENGINEERING

### Dean

Prof. Dr. Nadeem Ahmad Mufti

### Chairman

Prof. Dr. Nasir Hayat

### Professor Emeritus

Prof. Dilshad Hussain

### Professors

Prof. Dr. Tauseef Aized

Prof. Dr. Asad Naeem Shah

Prof. Dr. Asif Mahmood Qureshi

Prof. Dr. Amjad Hussain

Prof. Dr. Ghulam Moeen-ud-Din

Prof. Dr. Muhammad Mahmood Aslam Bhutta

Prof. Dr. Muhammad Asim

### Associate Professors

Dr. Awais Ahmad Khan

Dr. Muhammad Usman

Dr. Zia-ul-Rehman Tahir

Dr. Jamal Umer

### Assistant Professors

Dr. Naseer Ahmad

Mr. Shabbir Hussain

Mr. Muhammad Rashid Sajid

Mr. Muhammad Kashif Tariq

Mr. Umair Ashraf Khokhar

Dr. Hafiz Zahid Nabi

Mr. Ahmad Naveed

Mr. Syed Saqib

Dr. Jawad Sarwar

Dr. Jafar Hussain

Dr. Muhammad Zubair Sheikh

Dr. Syed Nadeem Abbas Shah

Dr. Muhammad Waqar Nasir

### Lecturers

Mrs. Rabbia Sehar

Hafiz Muhammad Ahmad\*\*

Mr. Muhammad Imran Masood\*\*

Dr. Talha Khan

Mr. Tahir Ameen\*\*

Mr. Haris Hussain\*\*

Syed Wasim Hassan Zubair

Mrs. Hibbah Akhtar\*\*

Miss Anam Abbas\*\*

Mr. Rehmat Bashir

Mr. Muhammad Waqas Rafique

\*\* On Study Leave abroad



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

- B.Sc. Mechanical Engineering
- M.Sc. Mechanical Design Engineering
- M.Sc. Thermal Power Engineering
- M.Sc. Renewable Energy Systems Engineering
- Ph.D. Mechanical Engineering

### **Mission**

To produce mechanical engineers, equipped with knowledge and skills to carry on lifelong learning, through quality teaching and training. Our graduates shall be able to serve for the sustainable development of the society while demonstrating professional ethics and social conduct.

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

- **PEO-1:** Apply the knowledge to solve analytical and practical engineering problems. (Engineering Capabilities)
- **PEO-2:** Work for continuous professional and sustainable socio-technical development. (Societal Development and Lifelong Learning)
- **PEO-3:** Demonstrate professional ethics, effective communication, and managerial skills. (Ethics, Management, and Communication)

### **Laboratories and other Facilities**

The latest equipment has 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
- Instrumentation & Control
- Vibrations
- Machine Tools & Machining
- FDM Based 3D Printing

The Department has several licensed software (Pro- E, Solid Works, AutoCAD, CATIA, Fluent, ANSYS, TRNSYS, Solid Edge, HAP, Ecotect, MATLAB, etc.), and students make use of them throughout their studies.

### **University Workshops**

The University Workshops were established in 1937 and are designed to provide know-how with hands-on practical training in workshop technology to engineering students. A package practical course, titled "Workshop Practice" is offered to all first-year undergraduate students of the engineering disciplines. 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 tasks efficiently and successfully. The course offered inculcates self-confidence in the students, for their success in future careers.

Following shops are available in the workshops:

- i. Machine Shop
- ii. Fitting Shop
- iii. Carpentry Shop
- iv. Electric Shop
- v. Welding Shop

### **Design Center**

The Design Center has been established with the aim of providing state-of-the-art facilities to the students for designing, prototyping, and developing projects.

Currently the Design Center has the following facilities:

- i. Flexible Manufacturing Systems Shop
- ii. Heat Treatment Shop
- iii. Welding Shop
- iv. Machine Shop-I
- v. Machine Shop-II

### **Consultancy & Advisory Services**

The Department believes in a strong Academic-Industrial interaction and regularly offer refresher courses to the local industry on several topics related to Mechanical Engineering. 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**

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
HU-111L	Communication Skills	0	1	IS-101	Islamic and Pak Studies-I	3	0
MA-113	Calculus and Analytic Geometry	3	0	ME-131(22) & ME-131(22)L	Materials and Manufacturing-I	3	1
PHY-119	Engineering Physics	2	0	ME-124(22)	Engineering Mechanics-II	2	0
CS-103 & CS-103L	Introduction to Computer Programming for Data Science	2	1	HU-221L	Technical Writing & Presentation Skills	0	1
ME-111 & ME-111L	Thermodynamics-I	3	1	MA-225	Differential Equations and Transforms	3	0
ME-121(22) & ME-121(22)L	Engineering Graphics and Drawing	1	1	EE-101(22) & EE-101(22)L	Electrical Engineering and Electronics	2	1
ME-123(22)	Engineering Mechanics-I	2	0	ME-100L	Workshop Practice	0	1
QT-101	Translation of Holy Quran-I	1	0	ME-122(22)L	Engineering Mechanics	0	1
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
IS-201	Islamic and Pakistan Studies -II	3	0	ME-272	Engineering Project Management	2	0
ME-231(22) & ME-231(22)L	Materials and Manufacturing-II (ME-131(22))	2	1	ME-212 & ME-212L	Thermodynamics-II (ME-111)	3	1
ME-251L	Computer Aided Drawing	0	1	ME-213(22) & ME-213(22)L	Fluid Mechanics-II (ME-211(22))	3	1
ME-221 & ME-221L	Mechanics of Materials-I	3	1	ME-222 & ME-222L	Mechanics of Materials-II (ME-221)	3	1
ME-211(22) & ME-211(22)L	Fluid Mechanics-I	3	1	MA-241	Applied Engineering Statistics	2	0
QT-201	Translation of Holy Quran-II	1	0	ME-273 & ME-273L	Engineering Entrepreneurship	1	1
HU-003	International Language	0	0				
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
ME-321(22) & ME-321(22)L	Mechanics of Machines	3	1	ME-342 & ME-342L	Robotics and Automation (ME-341(22))	2	1
ME-312(22) & ME-312(22)L	Heat and Mass Transfer	2	1	ME-382 & ME-382L	Engineering Data Analytics & AI	2	1
ME-341(22)	Instrumentation and Control	2	0	ME-323 (22)	Machine Design II (ME-322(22))	2	0
ME-322(22)	Machine Design -I	3	0	ME-352L	Computer Aided Design-II	0	1
ME-351L	Computer Aided Design -I	0	1	ME-332	Metrology and Quality Assurance (MA-241)	2	0
ME-381	Health Safety & Industrial Environment	2	0	ME-361(22)	Energy Resources and Utilization	2	0
ME-399L	Semester Design Project	0	1	ME-353 & ME-353L	Computational Engineering-I	2	1
QT-301	Translation of Holy Quran-III	1	0	ME-371	Professional Ethics in Engineering Practices	2	0
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
ME-461	Energy Conservation and Management (ME-361(22))	2	0	ME-415(22)	Power Plants Engineering (ME-212)	2	0
ME-478	Engineering Economics	2	0	ME-464L	Energy & Power Systems	0	1
ME-453 & ME-453L	Computational Engineering-II (ME-353)	2	1	ME-412(22) & ME-412(22)L	Refrigeration and Air Conditioning (ME-312(22))	2	1
ME-411 & ME-411L	IC Engine (ME-212)	2	1	ME-421(22) & ME-421(22)L	Mechanical Vibrations (ME-321(22))	3	1
ME-496L	FYDP-I	0	3	ME-472	Supply Chain Management	2	0
ME-4xx	Elective-I	2	0	ME-497L	FYDP-II (ME-496L)	0	3
QT-401	Translation of Holy Quran-IV	1	0	ME-4xx	Elective-II	2	0
ME-471	Production and Operations Management	2	0				



## AUTOMOTIVE ENGINEERING CENTRE

### Dean

Prof. Dr. Nadeem Ahmad Mufti

### Director

Dr. Ali Hussain Kazim

### Assistant Professors

Dr. Hasan Izhar Khan

Dr. Saad Jahangir

Dr. Muhammad Ali Shahbaz

### Lecturers

Mr. Omer Asghar

Mr. Adeel Shehzad

Mr. Sheikh Tahir Asif

Mr. Muhammad Usman Sheikh

Mr. Muhammad Jawad

### Overview

Automotive industry has been flourishing in Pakistan since the last decade. With the increase in purchasing power and enhancement of quality of life of middle class the production of cars has been increasing and new companies have also initiated production. Automotive industry has become an essential part of modern lifestyle because of the wider use of cars, buses, motorcycles, trucks, tractors, and other agricultural machinery. The automotive industry is a pillar of the national economy, a main driver of macroeconomic growth and technological advancement, spanning many adjacent industries.

The Automotive Engineering Centre was initiated in 2005 to contribute to the automotive engineering field through research and innovation. A wide variety of Research, Development & Consultancy facilities such as engine performance testing, emission testing, automotive noise level measurement etc., are available at the Centre to support educational and industrial requirements.

The B.Sc. Automotive Engineering program has been accredited by Pakistan Engineering Council (PEC), under Washington Accord (WA), on Level II Outcome Based Education (OBE) system.

For more details, you can visit the official website at: <https://aec.uet.edu.pk>

### Programs of Study

- a) B.Sc. Automotive Engineering
- b) M.Sc. Automotive Engineering

### Mission

To produce competent engineers who contribute to the society with knowledge, skill and attitude for design, analysis and sustainable development in the automotive engineering.

**Program Educational Objectives (PEOs)**

**PEO-01:** Apply knowledge and investigate complex engineering problems using modern tools related to automotive engineering.

**PEO-02:** To meet the technological challenges and diverse needs of the industry and society in various areas of automotive engineering.

**PEO-03:** Manifest effective communication and managerial skills with ethical, environmental, and global responsibilities.

**Laboratories and Other Facilities**

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

- Internal Combustion Engines Lab
- Alternative Fuel Lab
- Vehicle Emission Lab
- Fuel Injection Lab
- Vehicle Testing Lab
- Vehicle Mechanisms Lab
- Hybrid & Electric Vehicles Lab
- Vehicle Management Lab
- Automotive Electronics Lab
- Brake and Suspension Lab
- Chassis Lab

**Career Opportunities**

Automotive Engineering graduates may work as automotive design engineer, quality control engineer, manufacturing engineer, sales engineer, service engineer, research & development engineer etc. Graduates have sufficient opportunities of getting jobs in prestigious international automotive manufacturing organizations such as Toyota, Honda, Changan, Kia, Hyundai, Suzuki, Morris Garages (MG), FAW, Yamaha etc. and work with local companies such as Pakistan Association of Automotive Parts & Accessories Manufacturers (PAAPAM), Al-Ghazi Tractors, Heavy Industries Taxila, Millat Tractors. Ravi Motorcycles, Sazgar, United Auto Industries, Jolta, etc.

**B.Sc. Automotive Engineering**

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
HU-111L	Communication Skills	0	1	IS-101	Islamic & Pakistan Studies-I	3	0
MA-113	Calculus and Analytic Geometry	3	0	EE-101(22)	Electrical Engineering & Electronics	2	0
PHY-119	Engineering Physics	2	0	ME-132	Manufacturing Processes	2	1
ME-121(22)	Engineering Graphics & Drawing	1	1	ME-122(22)	Engineering Mechanics	3	1
ME-111	Thermodynamics-I	3	1	ME-100L	Workshop Practice	0	1
AM-131	Engineering Materials	2	0	MA-129	Vector and Complex Analysis	3	0
CS-103	Introduction of Computer Programming for Data Science	2	1	HU-221L	Technical Writing & Presentation Skills	0	1
QT-101	Translation of Holy Quran-I	1	0				
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
AM-202	Automotive Electronics	2	1	AM-223	Vehicle Dynamics (ME-122(22))	2	0
IS-201	Islamic & Pak Studies-II	3	0	MA-242(22)	Engineering Statistics	2	0
MA-225	Differential Equations and Transforms	3	0	ME-212	Thermodynamics-II (ME-111)	3	1
AM-211(22)	Fluid Mechanics-I	3	1	AM-231	Project Management and Engineering Economics	3	0
ME-221	Mechanics of Materials-I (ME-122(22))	3	1	ME-222	Mechanics of Materials-II (ME-221)	3	1
QT-201	Translation of Holy Quran-II	1	0	AM-212	Fluid Mechanics-II	2	1
				HU-003	International Language	0	0
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
ME-312(22)	Heat and Mass Transfer (ME-212)	2	1	AM-326	Vehicle Structure Design (ME-221)	2	1
AM-331	Machine Tools and Machining (ME-132)	2	1	AM-325	Design for Manufacturing	3	0
MA-240	Numerical Analysis	2	0	AM-332	Quality & Reliability Engineering	3	0
AM-313	Fuels and Combustion (ME-111)	2	0	AM-315	Vehicle Air Conditioning (ME-212)	2	1
AM-314	Vehicle Tribology	2	0	AM-333(22)	Computer Integrated Manufacturing (ME-132)	2	1
AM-321(22)	Design of Machine Elements (ME-221)	3	1	QT-301	Translation of Holy Quran-III	1	0
				ME-371	Professional Ethics in Engineering Practices	2	0
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
ME-451	Finite Element Analysis	2	1	AM-423	Vibration & Noise Control (ME-122(22))	2	1
AM-411	IC Engines (ME-212)	2	1	AM-442	Intelligent Vehicles	2	0
AM-441(22)	Vehicle Instrumentation and Control Systems (AM-202)	2	1	AM-413	Computational Fluid Dynamics (AM-212)	2	1
ME-471	Production and Operations Management	2	0	AM-414	Hybrid Vehicles	2	1
AM-498L	FYDP-I	0	3	AM-499L	FYDP-II (AM-498L)	0	3
AM 4XX	Elective I	2	0	AM 4XX	Elective II	2	0
ME-472	Supply Chain Management	2	0	QT-401	Translation of Holy Quran-IV	1	0
Elective Courses							
AM-417	Energy Storage Technologies in Vehicles						
AM-426	Powertrain Design						
AM-431	Automotive Paints & Coatings						
AM-432	Automotive Health, Safety & Environment						
AM-433	Micro & Nano Manufacturing						
AM 434	Additive Manufacturing in Automotive						
AM-436	Automotive Ergonomics						
AM-437	Automotive Assembly Plant Facility Development						
AM-443	Autonomous Vehicle						
AM-444	Vehicle Management Systems						



## DEPARTMENT OF INDUSTRIAL & MANUFACTURING ENGINEERING

**Dean**  
Prof. Dr. Nadeem Ahmad Mufti

Dr. Sarmad Ali Khan  
Dr. Sadaf Zahoor

Dr. Muhammad Salman Habib

**Chairman**  
Prof. Dr. Muhammad Qaiser Saleem

**Assistant Professors**  
Dr. Rakhshanda Naveed  
Dr. Muhammad Faisal Shahzad  
Mr. Bilal Arshad  
Dr. Syed Farhan Raza Rizvi

**Lecturers**  
Ms. Kiran Mughal  
Dr. Sana Ehsan  
Mr. Adeel Shehzad  
Mr. Omer Asghar

**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)

- 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 department was established in 2006 to cater for the ever competitive needs of industry which demand highly skilled and motivated engineers, equipped with excellent management & soft skills.

## Introduction

In a global marketplace, creating and maintaining competitive advantage is the key to success. Today's industry leaders must satisfy customers' expectations 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 train their newly inducted engineers for the aforementioned traits. Department of Industrial and Manufacturing Engineering, however, has designed its curricula to give its graduates a head start in this respect by including courses like Manufacturing Processes, Industrial Materials, Engineering Economics, Communication Skills, Project Management, Optimization Techniques, 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:

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

The department takes pride in the fact that its B.Sc. IME program has been accredited by Pakistan Engineering Council on Level II outcome based education (OBE) system. To ensure continuous compliance to the requirements of this system, following cells/committees have been formed

- OBE Core Committee
- Quality Control Cell
- Labs Committee
- Alumni, Internships, Final Year Projects & Industrial Linkages Cell
- Industrial Advisory Board
- Departmental Upkeep Committee

## Laboratories & Infrastructure

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

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

The department has modern computing facilities (i7 computers) and Wifi along with a well equipped library for facilitation of studies and research. 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 has also made it mandatory for third year students to successfully complete industrial internship for practical experience of real life. For this purpose an independent cell called Alumni, Industrial Linkages and Internship Cell is established to facilitate and monitor the internship process. The department also offers dynamic student life by providing range of co-curricular activities such as workshops, quizzes, seminars, sport galas etc. These are primarily arranged by students from the platform of Industrial and Manufacturing Engineering Club (IMEC) under the supervision of Chairman.



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

Year 1								
Semester 1						Semester 2		
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours		
		Th	Pr			Th	Pr	
EE-199	Basic Electrical and Electronics Engineering	3	1	IS-101/HU-101	Islamic & Pak Studies-I/Ethics & Pak Studies-I	3	0	
MA-111	Applied Mathematics-I	3	0	MA-112	Applied Mathematics-II (MA-111)	3	0	
IME-111	Industrial Materials	2	1	IME-121	Manufacturing Processes-I (IME-111,ME-100L)	3	1	
CY-181	Industrial Chemistry-I	2	1	IME-161	Engineering Drawing and Graphics	1	2	
ME-100L	Workshop practice	0	1	CS-103	Introduction to Computer Programming for Data Science	2	1	
IME-131	Engineering Mechanics	3	1	HU-111L	Communication Skill	0	1	
				HU-003	International Language	0	0	
				QT-101	Translation of Holy Quran-I	1	0	

Year 2								
Semester 3						Semester 4		
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours		
		Th	Pr			Th	Pr	
EE-215	Basic Industrial Electronics (EE-199)	2	1	IS-201/HU-201	Islamic and Pak Studies-II/Ethics & Pak Studies-II	3	0	
IME-232	Mechanics of Materials (IME-131)	3	1	MA-244	Probability and Statistics	2	1	
IME-241	Thermo-Fluids	3	1	IME-222	Manufacturing Processes-II (IME-121)	3	1	
IME-251	Social and Ethical Aspects in Engineering	2	0	IME-262	Machine Design and CAD (IME-161, IME-232)	3	1	
IME-252	Industrial Safety and Environment	2	0	HU-221	Technical writing and presentation skills	3	0	
IME-233	Mechanics of Machines	2	1	QT-201	Translation of Holy Quran-II	1	0	

Year 3								
Semester 5						Semester 6		
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours		
		Th	Pr			Th	Pr	
IME-363	Instrumentation and Control (MA-112, EE-215)	3	1	IME-354	Production Planning & Control	3	0	
MA-345	Numerical Methods in Computing (MA-111, CS-101)	3	1	IME-364	CAD/CAM (IME-222, IME-262)	2	1	
CS-384	Introduction to Data Sciences	2	1	IME-381	Metrology and Quality Control (MA-244)	2	1	
IME-353	Human Factor Engineering	3	1	IME-372	Optimization Techniques for Engineers	2	1	
IME-371	Engineering Economics	2	0	MGT-317	Project Management in Engineering	3	0	
				QT-301	Translation of Holy Quran-III	1	0	

Year 4								
Semester 7						Semester 8		
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours		
		Th	Pr			Th	Pr	
IME-xxx	Elective-I	3	1	IME-xxx	Elective-III	3	1	
IME-465	Production Tooling Design (IME 262)	3	1	IME-xxx	Elective-IV	3	0	
MCT-434	Industrial Automation	2	1	IME-455	Production and Operations Management	3	0	
IME-xxx	Elective-II	3	0	IME-456	Total Quality Management	3	0	
IME-401L	Project-I	0	3	IME-402L	Project-II (IME-401L)	0	3	
				QT-401	Translation of Holy Quran-IV	1	0	



## DEPARTMENT OF MECHATRONICS & CONTROL ENGINEERING

### Dean

Prof. Dr. Nadeem Ahmad Mufti

### Chairman

Dr. Ali Raza

### Associate Professors

Dr. Ali Raza  
 Dr. Mohsin Rizwan  
 Dr. Muhammad Ahsan  
 Dr. Ummul Baneen  
 Dr. Syed Abbas Zilqurnain Naqvi

### Assistant Professors

Dr. Ayisha Nayyar  
 Ms. Aisha Shoaib  
 Dr. Maria Akram  
 Ms. Maliha Saleem Bakhshi  
 Dr. Muhammad Ahsan Naeem

### Lecturers

Ms. Amina Younas  
 Mr. Muhammad Rzi Abbas  
 Mr. Misbah-ur-Rehman  
 Mr. Amir Sharif  
 Ms. Qurat Ul Ain Masud  
 Mr. Shujat Ali  
 Mr. Abdullah Sheeraz

## INTRODUCTION

This program is accredited by Pakistan Engineering Council (PEC) under Washington Accord (W.A). Mechatronics 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, actronics/sensorics, Micro Electro Mechanical 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 of 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 303 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. Up til 2022, eighteen batches are serving the industry. Our graduates are serving in mechanical, electronic, instrumentation, automation, oil and gas, aviation and other sectors.

For more details, one can visit the official website at: <https://mce.uet.edu.pk/>

### **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, implement and/or maintain integrated solutions to general Mechatronics engineering problems.
- **PEO-02:** is capable of developing professional/managerial skills, while adhering to high ethical values, to excel in industry/research organizations or succeed in entrepreneurial ventures.
- **PEO-03:** can embark on new directions or enhance the existing practices in advancing the Mechatronics technologies which have direct national and international relevance.
- **PEO-04:** is capable of contributing to diversity, socioeconomic growth and sustainable development as a team member.

### **Laboratories and Other facilities**

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

- AI & Robotics Lab
- Hydraulics and Pneumatics Lab
- Instrumentation & Control Lab
- Simulation Lab
- Digital Systems Lab
- Mechanics Lab
- Power Electronics Lab
- Industrial Automation Lab
- Embedded Systems Lab
- Computer Lab

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.

### **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. The degree program has a compulsory internship component.

### **STUDENT ADVISORY SERVICES**

Department has deputed faculty members as session mentors so that students may seek guidance regarding different aspects of student's life in the university. Queries regarding curricular and co-curricular activities can be discussed with the allocated mentor.

### **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 LAB**

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 LAB**

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

#### **HUMAN-CENTERED ROBOTICS LAB of THE NCRA**

Human-Centered Robotics Lab of our department is part of newly established National Center of Robotics and Automation. The lab aims to indigenously design and develop integrated robotic systems, based on smart sensing and actuation, to seamlessly interact with humans, actively learn from them and eventually create an effective collaborative environment. A dedicated team of Mechatronics Engineers is currently working on the indigenous development of collaborative robots, industrial exo-skeletons and active prostheses. Recently, the HCR team has introduced it's first industrial-grade robotic arm to the Pakistani industry.

#### **IHYA LAB FOR MECHATRONICS RESEARCH IN RESUSCITATION SCIENCES**

This research lab has been recently established by the department of Mechatronics and Control Engineering in collaboration with Hamad Medical Corporation Qatar. The Lab aims to develop smart and marketable mechatronic devices which aid in the resuscitation practices, in and out of hospital settings, thus saving precious lives of the patients. It also aims to become an innovation hub in the domain of resuscitation sciences. Currently, the major focus of the lab is on the development of newer CPR technologies, sports-biomechanics and associated biomedical devices.

## B.Sc. Mechatronics and Control Engineering

Year 1							
Semester 1			Semester 2				
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
MA-113	Calculus and Analytic Geometry	3	0	MA-225	Differential Equations and Transforms	3	0
MCT-111	Engineering Graphics and Drawing	1	2	MCT-115	Engineering Statics	2	0
MCT-121	Electric Circuits	3	1	MCT-113	Manufacturing Processes	3	1
IS-101/HU-101	Islamic and Pak Studies –I/Ethics and Pak Studies - I	3	0	MCT-122	Electronic Devices and Circuits	3	1
PHY-118	Applied Physics	2	1	MCT-114	Fundamentals of Thermal Sciences	2	1
ME-100L	Workshop Practice	0	1	HU-111	Communication Skills	0	1
				QT-101	Translation of the Holy Quran-I	1	0
Year 2							
Semester 3			Semester 4				
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
HU-1xx	International Language	0	0	MA-234	Linear Algebra	3	0
MA-129	Vector and Complex Analysis	3	0	MCT-238	Embedded Systems- I (MCT-241, MCT-122, MCT-242)	2	1
MCT-216	Engineering Dynamics (MCT-115)	3	0	MCT-213	Mechanisms	2	1
MCT-242	Computer Programming I	1	2	MCT-215	Mechanics of Materials	2	1
MCT-223	Electrical Machinery (MCT-121)	2	1	MCT-243	Computer Programming-II (MCT-242)	0	2
MCT-241	Digital Logic Design	3	1	IS-201 / HU-201	Islamic and Pak Studies –II/ Ethics and Pak Studies - II	3	0
QT-201	Translation of the Holy Quran - II	1	0				
Year 3							
Semester 5			Semester 6				
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
MA-240	Numerical Analysis (MCT-242)	2	1	MCT-304	Probability and Statistics (MCT-242)	2	1
MCT-311	Design of Machine Elements and CAD/CAM (MCT-215)	3	1	MCT-333	Control Systems – I (MCT-331)	3	1
MCT-313	Hydraulics and Pneumatics	3	1	MCT-335	Instrumentation and Measurements (MCT-122)	2	1
MCT-331	Modeling and Simulation (MA-225)	3	1	MCT-342	Signal and Systems (MA-225)	2	1
MCT-338	Embedded Systems-II (MCT-238)	1	1	MCT-352	Robotics (MA-234)	3	1
				QT-301	Translation of the Holy Quran-III	1	0
Year 4							
Semester 7			Elective Subjects				
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
MCT-402	Product Design	2	1	MCT-404	Professional Ethics	2	0
MCT-434	Industrial Automation	2	1	HU-221	Technical Writing & Presentation Skills	3	0
MCT-444	Control System-II (MCT-333)	3	0	MCT-4xx	Elective II	2	1
MCT-498	Final Project- I	0	3	MCT-4xx	Elective III	2	1
MCT-4xx	Elective-I	2	1	MCT-499	Final Project- II (MCT-498)	0	3
MGT-413	Entrepreneurship	3	0	MGT-211	Principles of Management	3	0
				QT-401	Translation of the Holy Quran - IV	1	0

## Elective Subjects

MCT-412	Condition Monitoring
MCT-415	Mechanical Vibrations
MCT-421	Digital Signal Processing (MCT-342)
MCT-422	Power Electronics (MCT-122)
MCT-432	Digital Control Systems (MCT-333)
MCT-433	Estimation and Filtering (MCT-333)
MCT-452	Intelligent Systems (MCT-242)
MCT-453	Machine Vision (MCT-243)
MCT-454	Mobile Robotics (MCT-351)
MCT-455	Wearable Robotics
MCT-456	Internet of Things
MCT-457	Biomedical Devices
MCT-458	Home Centered Robotics
MCT-491	Special Topics in Mechatronics





## DEPARTMENT OF CIVIL ENGINEERING

### Dean

Prof. Dr. Habib-ur-Rehman

### Chairman

Prof. Dr. Khalid Farooq

### Professor Emeritus

Dr. Zia ud Din Mian

### Professors

Dr. Noor Muhammad Khan

Dr. Asad Ullah Qazi

Dr. Asif Hameed

Dr. Muhammad Burhan Sharif

Dr. Rashid Hameed

Dr. Hassan Mujtaba Shahzad

### Associate Professors

Dr. Riaz Ahmad Goraya

Dr. Muhammad Azhar Saleem

Dr. Safeer Abbas

Dr. Qasim Shaukat Khan

Dr. Ali Ahmed

Dr. Nauman Khurram

Dr. Jehanzaib Israr

Dr. Muhammad Irfan-ul-Hassan

Dr. Waseem Abbass

Dr. Rizwan Azam

Dr. Muhammad Mazhar Saleem

Dr. Muhammad Rizwan Riaz

### Assistant Professors

Dr. Imtiaz Rashid

Dr. Muhammad Yousaf

Dr. Usman Akmal

Mr. Ehtesham Mehmood

Mr. Usman Ali

Dr. Syed Asad Ali Gillani

Dr. Umbreen us Sahar

Dr. Aqsa Shabbir

Dr. Muhammad Shahid

### Lecturers

Mr. Muhammad Rehan Ashraf

Mr. Ubaid Ahmad Mughal

Ms. Aamina Rajput

Mr. Bilal Ahmad Khokar

Dr. Muhammad Ali

Dr. Muhammad Kashif

Mr. Abdul Rehman

The Department of Civil Engineering at UET Lahore is one of the oldest departments in the country imparting Civil Engineering courses at undergraduate and postgraduate levels. The Department was established in 1939 as a part of the Maclagan Engineering College, Lahore. Currently, it has an enrolment of over 1000 students in bachelor, Master and Ph.D. The number of Ph.D. faculty members serving in the department is maximum comparable to any other Civil Engineering program offered in the country. Civil engineering discipline 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.

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 Department (PID), Civil Aviation Authority, Pakistan Railways, National Highway Authority (NHA), Lahore Development Authority (LDA), Water and Sanitation Agency (WASA), Public Health Engineering Department (PHED), National Engineering Services Pakistan (NESPAK), Associated Consultant Engineers (ACE), National Development Consultants (NDC), SKB Engineering & Construction, Descon Engineering Limited, Atomic

Energy Commission (AEC) and many more. Due to the active participation by the students and faculty of this Department, UET was declared as outstanding University for the years 2014 and 2015 by American Concrete Institute.

Dr. Mubashir Hassan (Ex. Federal Finance Minister), Dr. Ahmad Jan Durrani (Ex. Vice Chancellor LUMS), Dr. Shamsul Malik (Ex. Chairman WAPDA), Dr. Tahir Masood, Dr. Shamim A. Sheikh, Dr. Mehreen Farooqi, Dr. Adil Najam and Prof. Dr. Hanif Chaudhry are some of the famous alumni of the Civil Engineering Department.

### **Mission**

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

### **Outcome Based Education System**

Civil Engineering program has opted and accredited for Outcome Based Education (OBE) system since session-2012.

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

**PEO-01.** Graduates demonstrate their proficiency in applying the knowledge & skills to solve complex civil engineering problems.

**PEO-02.** Graduates communicate effectively and contribute in the project team.

**PEO-03.** Graduates uphold principles of ethics and societal obligations with integrity throughout their professional practices.

**PEO-04.** Graduates engage themselves in the continuous professional learning process for sustainability.

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

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

### **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:

- Concrete Laboratories
- Computer Centre
- Earthquake Engineering Laboratory
- Engineering Mechanics Laboratory
- Geotechnical-Foundation Engineering Laboratory
- Hydraulics & Irrigation Engineering Laboratory
- Strength of Materials Laboratory
- Surveying & Levelling Laboratory
- Test Floor Laboratory
- Transportation Engineering Laboratory

Civil Engineering graduates are eligible to get membership form Pakistan Engineering Council (PEC) which has become the full signatory of prestigious Washington Accord (WA). This would facilitate mobility of engineering graduates and professionals of Pakistan at international levels as undergraduate degree program of Civil Engineering is well recognized in all Washington Accord countries. The graduates from PEC accredited engineering programs will be accepted for education and employment purposes in other member countries of Washington Accord.

**B.Sc. Civil Engineering****YEAR-1**

1 <sup>st</sup> Semester				2 <sup>nd</sup> Semester			
Course Code	Subject	Credit Hours		Course Code	Subject	Credit Hours	
		Th	Pr			Th	Pr
CE-103	Construction Materials	2	1	CE-101	Elementary Surveying	3	1
CE-105	Civil Engineering Drawing	1	2	CE-102	Computer Programming	2	1
Phy-122	Basic Mechanics	2	1	HU-101	Communication Skills	0	1
MA-111	Applied Mathematics-I	3	0	IS/Hu-101	Islamic & Pak Studies/ Ethics	3	0
EE-198	Basic Electrical Technology	1	1	MA-112	Applied Mathematics-II	3	0
MinE-170	Basic Engineering Geology	2	0	ME-119	Basic Mechanical Technology	1	0
QT-101	Translation of the Holy Quran-I	1	0	ME-100L	Workshop Practice	0	1

**YEAR-2**

3 <sup>rd</sup> Semester				4 <sup>th</sup> Semester			
Course Code	Subject	Credit Hours		Course Code	Subject	Credit Hours	
		Th	Pr			Th	Pr
CE-201	Surveying and GIS-RS Applications	3	1	CE-205	Civil Engineering Construction & Graphics	2	1
CE-212	Mechanics of Materials	3	1	CE-207	Engineering Economy and Construction Management	3	1
CE-231	Fluid Mechanics-I	3	1	CE-211	Elementary Structural Analysis	3	0
IS/HU-201	Islamic & Pak Studies/Ethics	3	0	CE-221	Geotechnical Engineering-I	3	1
MA-240	Numerical Analysis	2	1	ATP-201	Introduction to Architecture and Town Planning	2	0
				QT-201	Translation of the Holy Quran-II	1	0

**YEAR-3**

5 <sup>th</sup> Semester				6 <sup>th</sup> Semester			
Course Code	Subject	Credit Hours		Course Code	Subject	Credit Hours	
		Th	Pr			Th	Pr
Mgt-317	Project Management in Engineering	2	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-305	Hazards and Disaster Management	2	0
CE-332	Hydrology and Water Resources Management	2	1	MA-356	Probability and Statistics in Engineering	2	0
HU-300	Technical Report Writing	0	1	Mgt-319	Entrepreneurship for Engineers	1	0
QT-301	Translation of the Holy Quran-III	1	0	CE-306	Professional Ethics	1	0

**YEAR-4**

7 <sup>th</sup> Semester				8 <sup>th</sup> Semester			
Course Code	Subject	Credit Hours		Course Code	Subject	Credit Hours	
		Th	Pr			Th	Pr
CE-412	Structural Engineering	3	1	CE-431	Irrigation Engineering	3	1
CE-411	Plain & Reinforced Concrete-II	3	1	CE-413	Design of Structures	2	1
CE-421	Transportation Engineering	3	1	CE-423	Pavement & Foundation Engineering	3	0
CE-434	Hydraulic Engineering	3	1	ENE-440	Environmental Engineering	3	1
CE-499	Project	0	3	QT-401	Translation of the Holy Quran-IV	1	0
				CE-499	Project	0	3





## DEPARTMENT OF ARCHITECTURAL ENGINEERING & DESIGN

### Dean

Prof. Dr. Habib Ur Rehman

### Chairman

Prof. Dr. Sajjad Mubin

### Professor

Dr. Sabahat Arif

### Associate Professor

Dr. Khuram Rashid

### Assistant Professors

Mr. Imran Ahmad Saeed

Dr. Maria Idrees

Dr. Nasir Javed

Dr. Ahmed Riaz

### Lecturers

Ms. Anam Fatima

Mr. H. Abrar Ahmad

Mr. Abdul Mueed Iqbal

Ms. Huda Riaz Ms. Afia Razzaq

Ms. Khadija Mawra

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 4-years B.Sc. Architectural Engineering, M.Sc. Building Engineering, M.Sc. Integrated Building Design, M.Sc. Construction Management and PhD in Architectural Engineering. The Architectural Engineering program is a blend of Architecture and Engineering, the emphasis of this 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 program 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 7<sup>th</sup> out of nineteen undergraduate programs at UET Lahore. An Architectural Engineer having background of multidisciplinary knowledge on various areas of buildings has a greater opportunity to work according to his/her aptitude. The most prominent areas of curriculum include Building Structures, HVAC system of Buildings, Electrical System of Buildings (Lighting and Illumination), Water Supply and Sanitation System of Buildings, 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 course in 8<sup>th</sup> 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 Architectural Engineering, Civil Engineering, Architecture, Electrical Engineering, Mechanical Engineering and Environmental Engineering. The department has a dedicated library, three Digital Studios and six Laboratories including Structural Engineering Laboratory, Construction Laboratory, Geo-Technical Engineering Laboratory, Survey Laboratory, Environmental Control Systems Laboratory, Materials Laboratory and Electrical Laboratory.

**Mission**

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

**Program Educational Objectives (PEOs)**

**PEO-01:** Have ability to propose reasonably acceptable, sustainable and innovative solutions of routine projects and complex architectural engineering problems.

**PEO-02:** Have attained position of leadership of a small section/ team and enjoying good repute in terms of communication skills and professional ethics.

**PEO-03:** Continue to improve serviceable skills related to the profession through continuing education (higher education, participation in training courses, workshops, conferences, CPD courses, seminars)



## B.Sc. Architectural Engineering

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Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
AE-101	Surveying	2	1	HU-111L	Communication Skills	0	1
CS-103	Computing Fundamentals	2	1	AE-151	Occupational Health and Safety	2	0
IS-101	Islamic and Pak Studies-I	3	0	AE-132	Mechanics of Materials-I	3	1
MA-123	Calculus	3	0	PHY-102	Physics for Architectural Engineers	2	1
AE-114	Construction Materials	2	1	ME-100WL	Workshop Practice	0	1
AE-145L	Architectural & Engineering Drawing	0	2	AE-144	History of Building Technology	2	0
QT-101	Translation of the Holy Quran-I	1	0	AE-143L	Computer Aided Drawing	0	2
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
IS-201	Islamic And Pak Studies-II	3	0	MA-234	Linear Algebra	3	0
MA-228	Differential Equation	3	0	AE-225	Renewable Energy Systems for Buildings	1	1
AE-235	Elementary Structural Analysis	3	0	AE-234	Mechanics of Materials-II	3	1
AE-243L	Architectural Design-I	0	2	AE-214	Construction Engineering and Building Information Modelling	3	1
AE-220	Environmental Control Systems	2	1	AE-244L	Architectural Design-II	0	3
AE-201	Computer Programming and Numerical Analysis	1	1				
QT-201	Translation of the Holy Quran-II	1	0				
HU-204	Foreign Language	0	1				
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
AE-301	Water Supply & Sanitation System for Buildings	3	1	HU-221	Technical Writing and Presentation Skills	3	0
AE-327	Electrical Systems for Buildings	2	1	AE-328	Mechanical Systems for Buildings	2	1
AE-333	Design of Concrete Structures-I	3	1	AE-334	Design of Concrete Structures -II	3	1
AE-343L	BIM in Architectural Design	0	2	AE-364	Foundation Engineering	3	1
AE-363	Geotechnical Engineering	2	1	AE-351	Estimation & Quantity Surveying	2	1
QT-301	Translation of the Holy Quran-III	1	0				
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
AE-435	Computer Aided Structural Analysis	3	1	AE-437	Structural Dynamics & EQ Engineering	3	1
AE-436	Design of Steel Structures	3	1	AE-442L	Integrated Building Design-II	0	2
AE-441L	Integrated Building Design-I	0	2	MGT-413	Entrepreneurship for Engineers	1	0
AE-453	Construction Management	3	1	AE-454	Professional Ethics	2	0
AE-475L	Final Year Design Project	0	2	AE-4xx	Elective	2	0
QT-401	Translation of the Holy Quran-IV	1	0	AE-476L	Final Year Design Project	0	4
Elective Subjects							
Course No	Subject (Elective Subjects)	Credit Hours					
		Th	Pr				
AE-444	Zero Energy Buildings	2	0				
AE-403	Research Methodology	2	0				
AE-415	Sustainable and Energy Efficient Building Materials	2	0				
AE-455	Procurement Management	2	0				
AE-439	Structural Systems for High Rise Buildings	2	0				



## DEPARTMENT OF TRANSPORTATION ENGINEERING & MANAGEMENT

**Dean**

Prof. Dr. Habib-ur-Rehman

**Chairman**

Prof. Dr. Ammad Hassan Khan

**Professors**

Dr. Zia-ur-Rehman

**Assistant Professors**

Dr. Izza Anwar

Dr. Hina Saleemi

Dr. Saadia Tabassum

Dr. Mujasim Ali Rizvi

Dr. Bilal Zia Malik

Dr. Abdur Rahim

The Department of Transportation Engineering and Management (DTEM) was established under 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. The aim of establishment of this Department was to improve the existing transportation infrastructure and to develop human resource in professionals capable of planning, designing, constructing, managing, operating, and maintaining of various modes of transportations such as highways, railways, airways, seaways, and pipe ways. Seventeen sessions 2002-2018 of the DTEM have already been graduated.

**Mission**

Our mission is to produce high quality graduates in the field of Transportation Engineering, carry out research at national and international level, inculcating professionalism in our graduates, and provide advisory services at national level.



**Program Educational Objectives**

**PEO-01:** Solve complex problems related to Transportation Engineering

**PEO-02:** Apply concept of economy, environmental friendliness and sustainability in the practices of Transportation Engineering.

**PEO-03:** Become sound professionals capable of working with integrity and commitment with due consideration to ethical norms of society,

**PEO-04:** Provide services to society and engineering community or to uphold entrepreneurship through communication skills at national and international level.

**Courses of Study**

The Department offers the following courses of studies:

- a) B.Sc. Transportation Engineering
- b) M.Sc. Transportation Engineering
- c) 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.

**Laboratories and Other Facilities**

The Department has various dedicated laboratories that include Geo-materials, Transportation Materials Improvement, Transportation Computer Aided Design, Asphalt and Concrete Mix Design, Traffic Engineering and is in a process of establishing Railway Engineering, and Geomatics Engineering Labs. 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.

Transportation engineering graduates of this program have sufficient opportunities of getting jobs in various government/private departments including (but not limited to), Lahore Development Authority (LDA), Traffic Engineering & Transport Planning Agency (TEPA) under Lahore Development Authority (LDA), Punjab Mass Transit Authority (PMA), Orange Line Metro Rail Transit Service (OLMRTS), Urban Unit, National Engineering Services Pakistan (NESPAK), Associated Consultant Engineers (ACE), National Development Consultants (NDC), SKB Engineering & Construction, Frontier Welfare Organization (FWO), National Logistics Cell (NLC), National Highway Authority (NHA), Multan Development Authority (MDA) and many other public and private sector organizations. Since, accreditation of Program with PEC level-II Washington Accord the international recognition and acceptance of graduates is rapidly increasing.

**B.Sc. Transportation Engineering**

Year 1									
Semester 1						Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours			
		Th	Pr			Th	Pr		
MA-113	Calculus and Analytic Geometry	3	0	HU-111 L	Communication Skills	0	1		
CY-101	Applied Chemistry	2	0	TE-106	Construction and Pavement Materials	2	1		
HU-102	Functional English	3	0	TE103 L	Engineering Drawing and Graphics	0	2		
CS-103	Introduction to Computer Programming for data science	2	1	TE-104	Introduction to Airport Engineering	2	0		
TE-102	Surveying-I	3	1	Geo-E-110	Physical Geology	3	1		
PHY-122	Engineering Mechanics	2	1	IS-101	Islamic & Pak Studies - I	3	0		
QT-101	Translation of the Holy Quran-I	1	0	TE-105	Information and Communication Technologies in Transport	2	1		
Year 2									
Semester 3						Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours			
		Th	Pr			Th	Pr		
IS-201	Islamic & Pak Studies-II (IS-101)	3	0	TE-203	Geotechnical Engineering-I	3	1		
TE-212	Mechanics of Solids (PHY-122)	2	1	TE-224	Structural Analysis (TE-212)	2	1		
TE-213	Surveying-II (TE-102)	2	1	MA-240	Numerical analysis	2	1		
MA-228	Differential Equations	3	0	HU-221 L	Technical Writing and Presentation Skills (HU-111)	0	1		
EE-299	Electrical Systems for Transport Infrastructure	2	1	TE-205	Engineering Economics	2	0		
QT-201	Translation of the Holy Quran-II	1	0	TE-206	Traffic Engineering - I	2	1		
				TE-208	Automotive Engineering	2	1		
Year 3									
Semester 5						Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours			
		Th	Pr			Th	Pr		
TE-311	Geotechnical Engineering-II (TE-203)	3	1	TE-314	Railway Engineering-I	2	0		
MA-356	Probability and Statistics in Engineering	2	0	Mgt-316A	Professional Ethics and Engineering Entrepreneurship	2	0		
EnE-307	Environmental Engineering	2	1	TE-315	Pavement Analysis and Design	2	1		
TE-312	Traffic Engineering – II (TE-206)	2	1	TE-316	Geometric Design for Transportation Facilities	2	1		
TE-333	Plain and Reinforced Concrete (TE-244)	2	1	TE-327	Transportation Planning	3	0		
QT-301	Translation of the Holy Quran-III	1	0	TE-318	Waterway Transportation	2	0		
				TE-329	Pipeway Engineering	2	0		
Year 4									
Semester 7						Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours			
		Th	Pr			Th	Pr		
TE-401	Bridge and Tunnel for Transportation Engineering	3	0	TE-471	Final Year Design Project	0	3		
TE-471	Final Year Design Project	0	3	TE-427	Project Management	2	1		
TE-423	Airport Engineering (TE-104)	3	0	TE-438	Pavement Evaluation and Rehabilitation (TE-424)	2	1		
TE-424	Pavement Drainage system and Design (TE-315)	2	1	TE-439	Sea Freight and Logistics (TE-425)	2	0		
TE-425	Ports and Harbour Management (TE-318)	2	0	TE-429	Railway Engineering-II (TE-314)	3	0		
QT-401	Translation of the Holy Quran-IV	1	0	TE-449	Transportation Informatics	2	1		



## INSTITUTE OF ENVIRONMENTAL ENGINEERING & RESEARCH

<b>Dean</b> Prof. Dr. Habib Ur Rehman	<b>Program Coordinator, B.Sc. Environmental Engineering</b> Dr. Mehwish Anis (Associate Professor)	<b>Assistant Professors</b> Dr. Ghulam Hussain
<b>Professor Emeritus</b> Dr. Javed Anwar Aziz	<b>Professors</b> Dr. Sajjad H. Sheikh	<b>Lecturers</b> Ms. Gul -E- Hina Ms. Sahar Aurangzeb Mr. Tanveer Ahmed Ms. Qurat-ul-Ain Mr. Haroon Rashid Ms. Azka Tauseef
<b>Director</b> Prof. Dr. Amir IkhlAQ	<b>Associate Professors</b> Dr. Muhammad Umar Farooq Dr. Muhammad Irfan Jalees	

### Introduction

The Institute was established in 1972 with the assistance of World Health Organization (WHO). It is the premier educational institute that train professionals in the field of Environmental Engineering. The areas include water supply, sewerage, water and wastewater treatment, solid waste management, air pollution control and environmental studies. Until 2004, its role remained as a post-graduate institute. However, to meet the increasing demand of professionals in the field of environmental engineering, B.Sc. Environmental Engineering degree was initiated in 2005. It is also one of the oldest and most reliable Institute that provides commercial testing services of water, wastewater, and air quality. The Institute remained instrumental in framing National Environmental Quality Standards (NEQS) and National Standards for Drinking Water Quality (NSDWQ). In 2017, it switched to Outcome Based Education (OBE) system. Batches from 2013 and onwards are accredited by Pakistan Engineering Council (PEC) on OBE. B.Sc. Environmental Engineering degree is now recognized by 18 members of Washington Accord including USA, UK, Australia, Canada, Japan, China, and others.

### Institute Mission Statement

To produce graduates capable to solve complex engineering problems related to environmental engineering, provide innovative and sustainable solutions for water supply, sewerage, water and wastewater treatment, solid waste management & air pollution problems, and devise appropriate solutions for the above utility services.

### Courses Offered

The following courses of study are offered at different levels

- B.Sc. in Environmental Engineering



- b) M.Sc. in Environmental Engineering
- c) BS in Environmental Science
- d) M.Phil. in Environmental Science
- e) Ph.D. in Environmental Engineering

### **Laboratories & Other Facilities**

The Institute has laboratory facilities in the following areas:

- Water and Wastewater Analysis
- Unit processes
- Air Pollution Monitoring
- Environmental Microbiology
- Heavy Metal Analysis
- Pesticides, insecticides, and organic compounds analysis

In addition, the institute is also equipped with modern computer laboratory having high speed internet facility and one library. All classrooms are air conditioned and equipment with essential audio-visual aids.

### **Research & Investigation**

High quality research is conducted in the following areas:

- Water pollution analysis & control
- Water supply and sanitation
- Water and air quality modeling
- Air pollution analysis and control
- Water treatment
- Wastewater treatment
- Climate change

Research is problem based and conducted through M.Sc., M.Phil., and Ph.D. students. Research work is published in high quality international journals and is widely cited throughout the world.

### **Careers in Environmental Engineering**

The graduates of IEER have very encouraging employment rate. They are serving within and outside the country. The employers of IEER graduates within the country include Water and Sanitation Agencies (WASAs), Water and Power Development Authority (WAPDA), Lahore Waste Management Company (LWMC), The Urban Unit, Punjab, Environmental Protection Department (EPD), WWF Pakistan, NESPAK, Mott McDonalds Pakistan (MMP), National Development Consultants (NDC) and several other national consulting firms. The graduates of IEER have also been serving in international firms including Saud Consult, Saudi Arabia, Parsons International Limited, UAE etc.

### **B.Sc. Environmental Engineering Program**

Since its inception in 2005, the B.Sc. Environmental Engineering degree program was accredited by PEC. Recently it has switched to Outcome Based Education (OBE) system.

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

Program educational objectives (PEOs) of undergraduate program are listed as under:

- **PEO-01:** Graduates will be designing and developing sustainable solutions, providing stewardship for the challenging environmental problems in national and international organizations.
- **PEO-02:** Graduates will excel in their professional careers by exhibiting analytical and soft skills along with latest tools usage.
- **PEO-03:** Graduates will spearhead the environmental projects, observe ethical and professional values while fulfilling the diverse needs of society.

**B.Sc. Environmental Engineering**

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
HU-111	Communication Skills	0	1	CS-103	Introduction of Computer Programming for Data Science	2	1
IS-101	I & P Studies/ E& P Studies-I	3	0	EnE-104	Environmental Chemistry	2	1
CE-101	Elementary Surveying	3	1	ME-100L	Workshop Practice	0	1
EnE-101	Introduction to Environmental Engineering	2	0	MA-116	Linear Algebra & Differential Equations	3	0
MA-115	Engineering Mathematics	3	0	EnE-103	Environmental Laws and Policies	2	0
				EnE-105	Ecological Management	2	0
				QT-101	Translation of Holy Quran I	1	0
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
IS-201	I & P Studies/ E & P Studies-II	3	0	ChE-252	Environmental Health and Safety	3	0
EnE-201	Environmental Microbiology	2	1	HU-221	Technical Writing and Presentation Skills	3	0
CE-232	Fluid Mechanics	3	1	TEM-225	Transportation Engineering	2	1
CE-235	Soil Mechanics	3	1	ME-238	Thermodynamics	2	1
MA-242	Engineering Statistics	3	0	CE-240	Engineering drawings and CAD	1	2
QT-201	Translation of Holy Quran II	1	0	CS-260	Programming Fundamentals (CS-103)	2	1
				CE-210	Structural Systems	3	0
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
CRP-301	Sustainable Urban Planning	2	0	EnE-326	Environmental Impact Assessment and Management	3	0
EnE-331	Water Supply and Wastewater Engineering	3	1	EnE-335	Principles of Water and Wastewater Treatment	3	1
EnE-312	Environmental Economics	2	0	ChE-320	Cleaner Production Techniques	2	0
EnE-323	Solid Waste Management	3	1	CE-345	Water Resources & Irrigation Engineering	3	0
EnE-324	Environmental Engineering Lab Techniques (EnE-104)	1	1	CE-346	Project Management and Construction Supervision	3	0
CE-333	Engineering Hydrology	2	1	MA-346	Numerical Methods	3	0
QT-301	Translation of Holy Quran III	1	0				
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
EnE-431	Air Pollution Control and Climate Change	3	1	EnE-434	Water and Wastewater Treatment Plant Design (EnE-335)	3	1
EnE-432	Environmental Modeling	2	1	EnE-433	Industrial and Hazardous Waste Management	3	0
CRP-412	GIS and Remote Sensing (CE-101)	2	1	EnE-426	Wastewater Disposal and Reuse	2	0
ME-481	Energy Resources & Management	2	0	MGT-413	Entrepreneurship	3	0
EnE-404	Ethics and Interpersonal Skills	1	1	EnE-499	Final Year Project	0	3
QT-401	Translation of Holy Quran IV	1	0				
EnE-499	Final Year Project	0	3				

**BS Environmental Science Program**

The B.Sc. Environmental Science degree program is recently started in IEER with following educational objectives.

**Program Educational Objectives (PEOs)**

Program educational objectives (PEOs) of undergraduate program are listed as under:

- **PEO-01:** Apply the knowledge of chemical and physical sciences to provide solutions of environmental problems through advance tools of the field.
- **PEO-02:** Acquire skills necessary for the management of environmental problems in multidisciplinary environment and demonstrate moral and ethical values in fulfilling professional and societal obligations.
- **PEO-03:** Commitment to continue learning for the professional growth of society and conservation of sustainable environment.

## BS Environmental Science

## Year 1

## Semester 1

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-101	Introduction to Environmental Science	3	0
ES-102	Environmental Biochemistry	2	1
MA-110	Basic Mathematics	3	0
HU-111L	Communication Skills	0	1
IS-101 or HU-101	Islamic and Pakistan Studies – I (Muslim students) or Ethics and Pakistan Studies – I (non-Muslim students)	3	0
CS-101 & CS- 101L	Computing Fundamentals	2	1

## Semester 2

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-103	Introduction to Earth Sciences	2	1
MGT-102	Sociology	3	0
ES-104	Psychology & Ethics	2	0
MA-123	Calculus	3	0
PHY-113 & PHY-113L	Applied Physics	2	1
CY-221 & CY- 221L	Inorganic and Organic Chemistry	2	1
QT-101	Translation of Holy Quran-1	1	0

## Year 2

## Semester 3

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-201	Occupational Safety, Health & Environment	2	1
PHY-211	Environmental Physics	3	0
ES-202	Economic Aspects of Environmental Protection	3	0
ES-203	Basics of Environmental Pollution	3	0
CY-142 &	Physical and Analytical Chemistry	2	1
IS-201 or HU-201	Islamic and Pakistan Studies – II (Muslim students) or Ethics and Pakistan Studies – II (non-Muslim students)	3	0

## Semester 4

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-204	Ecology & Environment	3	0
ES-205	Microbiology and Environment	2	1
ES-206	Environmental Chemistry	2	1
ES-207	Climatology	3	0
HU-221	Technical Writing and Presentation Skills	3	0
QT-201	Translation of Holy Quran-2	1	0

## Year 3

## Semester 5

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-301	Environmental Toxicology	2	1
ES-302	Environmental Profile of Pakistan	2	0
ES-303	Population and Environment	2	0
ES-304	Analytical Techniques in Environmental Sciences	2	1
ES-305	Project Planning & Management	3	0
ES-306	Hydrology & Water Pollution	2	0
ES-307	Energy & Environment	2	1

## Semester 6

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-308	Cleaner Production Techniques	3	0
CRP-302	GIS and Remote Sensing	2	1
ES-309	Environmental Management Systems	2	1
ES-310	Biodiversity & Conservation	2	1
ES-311	Solid Waste Management	2	0
ES-312	Soil and Environment	3	0
QT-301	Translation of Holy Quran-3	1	0

## Year 4

## Semester 7

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-401	Air Pollution	2	0
ES-402	Environmental Impact Assessment	2	1
ES-403	Research Methods in Environmental Sciences	3	0
ES-404	Environmental Sampling & Monitoring	2	1
	Elective Course - I	2	0
ES-496	Final Year Project-I	0	3
QT-401	Translation of Holy Quran-4	1	0

## Semester 8

Course No	Subject (Pre-requisites) Credit Hours	Credit Hours	
		Th	Pr
ES-405	Environmental Governance	2	0
ES-406	Climate Change	3	0
ES-407	Public Health and Environment	2	0
ES-408	Pollution Control Technologies	2	0
ES-409	Natural Resource Management	2	0
ES-410	Hazardous waste Management	2	0
	Elective Course II	2	0
ES-498	Final Year Project-II	0	3

## Elective Courses

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-411	Ecotourism	2	0
ES-412	Agro-ecology	2	0
ES-413	Urban Environmental Management	2	0

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
ES-414	Environmental Nanotechnology	2	0
ES-415	Marine Environmental Pollution	2	0



## DEPARTMENT OF CHEMICAL ENGINEERING

### Dean

Prof. Dr. –Ing. Naveed Ramzan

### Chairperson

Prof. Dr. Saima Yasin

### Professor Emeritus

Dr. Shahid Naveed

### Professor on SNGPL Chair of Gas Engineering

Dr. Saima Yasin (Acting)

### Professors

Dr. Hafiz Muhammad Zaheer Aslam

### Associate Professors

Dr. M. Azam Saeed

Dr. Muhammad Faheem

Dr. Usman Ali

Dr. Umair Aslam

Dr. Farhan Javed

### Assistant Professors

Mr. Qazi Zaka-ur-Rehman

Dr. Humayun Wali

Dr. Sidra Jabeen

Dr. Umer Afzal

Dr. Muhammad Wasim Tahir

Dr. Muhammad Asif Akhtar

Dr. Ayesha Irshad

Dr. Saira Bano

Dr. Hira Anjum

Dr. Farhan Ahmed

### Lecturers

Mr. Rizwan Ali

Ms. Hafiza Aroosa Aslam Khan

Ms. Sobia Anwar

Mr. Aamir Abbas

Mr. Hafiz Muhammad Mudasser

Mr. Qazi Muhammad Omer

Mr. Haseeb Ullah Khan Jatoti

### 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 operation's 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

**PEO-1:** Apply the knowledge, principles, and skills in process industry, academia, and complementary fields to meet the stakeholder requirements.

**PEO-2:** Graduates achieve professional success by practicing ethical behavior, social responsibility, and diversity, both as individuals and in team environments with effective communication.

**PEO-3:** Graduates pursue innovative approaches and career growth through professional practice, graduate studies, and other training programs in engineering sciences and management.

### Courses of Study

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

- a) B.Sc. Chemical Engineering
- b) M.Sc. Chemical Engineering
- c) 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 the 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.

### 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
- Catalysis & Energy Research
- Instrumentation and Control
- Mass Transfer
- Process/Wet Analysis
- Smart Class Room
- QEC Room
- UNSDGS wall
- Seminar Hall (300 capacity)
- Free Wifi internet

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.

**B.Sc. Chemical Engineering**

Year 1

Semester 1				Semester 2			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
ChE-101	Industrial Stoichiometry – I	3	0	ChE-108	Fluid Flow-I	3	0
CS-103	Introduction of Computer Programming for Data Science	2	1	ChE-104	Health and Safety at Workplace	2	0
CY-142	Physical and Analytical Chemistry	2	1	ChE-109	Chemical Process Industries	2	1
HU-111	Communication Skills	0	1	IS-101 or HU-101	Islamic and Pakistan Studies – I (Muslim students) or Ethics and Pakistan Studies – I (non-Muslim students)	3	0
MA-113	Calculus and Analytic Geometry	3	0	MA-118	Applied Mathematics and Statistics	3	0
ME-122L	Engineering Drawing	0	2	ME-100L	Workshop Practice	0	1
QT – 101	Translation of the Holy Qur'an -I	1	0	PHY-113	Applied Physics	2	1

Year 2

Semester 3				Semester 4			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
ChE-201	Industrial Stoichiometry – II	3	0	ChE-208	Fluid Flow-II	2	1
ChE-203	Particle Technology	3	1	ChE-209	Process Heat Transfer	3	1
ChE-204	Chemical Engineering Thermodynamics – I	3	1	ChE-210	Separation Processes-I	3	1
CY-221	Inorganic and Organic Chemistry	2	1	EE-140	Electrical Technology	2	1
HU-221L	Technical Writing and Presentation Skills	0	1	IS-201 or HU-201	Islamic and Pakistan Studies – II (Muslim students) or Ethics and Pakistan Studies – II (non-Muslim students)	3	0
MA-233L	Applied Mechanics	0	1				
QT – 201	Translation of the Holy Qur'an -II	1	0				

Year 3

Semester 5				Semester 6			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
ChE-301	Chemical Reaction Engineering	3	1	ChE-313	Chemical Process Design & Economics	3	0
ChE-311	Engineering Materials	2	0	ChE-314	Chemical Engineering Mathematics	2	0
ChE-312	Unit Processes	2	1	ChE-310	Separation Processes-II	2	1
ChE-304	Chemical Engineering Thermodynamics – II	3	0	ChE-307	Transport Phenomena	3	0
MA-240	Numerical Analysis	2	1	ChE-308	Energy Engineering	3	1
MGT-413	Entrepreneurship	3	0	ChE-315L	Process Modeling and Simulation	0	2
				QT – 301	Translation of the Holy Qur'an -III	1	0

Year 4

Semester 7				Semester 8			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
ChE-401	Chemical Reactor Design	2	0	ChE-406	Environmental Engineering	3	1
ChE-409	Chemical Process Equipment Design and Rating	3	0	ChE-432 to ChE-441	Elective-II	2	0
ChE-432 to ChE-441	Elective-I	2	0	ChE-421 to ChE-431	Elective-III	3	0
ChE-404	Instrumentation and Control	3	1	ChE-421 to ChE-431	Elective-IV	3	0
ChE-410	Engineering Management	2	0	ChE-462	Final Year Project – II	0	3
ChE-461	Final Year Project – I	0	3	QT – 401	Translation of the Holy Qur'an -IV	1	0

**Elective Subjects**

Course No	Subject	Credit Hours	
		Th	Pr
ChE-421	Gas Engineering	3	0
ChE-422	Biochemical Engineering	3	0
ChE-427	Biomass and Biofuels	3	0
ChE-428	Industrial Safety and Risk Management	3	0
ChE-429	Clean Coal Technologies	3	0
ChE-430	Material Characterization Techniques	3	0
ChE-431	Maintenance Engineering	3	0
ChE-432	Industrial Psychology and Ethics	2	0
ChE-433	Polymer Engineering	2	0

Course No	Subject	Credit Hours	
		Th	Pr
ChE-434	Petroleum Refinery	2	0
ChE-435	Food Engineering	2	0
ChE-436	Membrane Technology	2	0
ChE-437	Computational Fluid Dynamics	2	0
ChE-438	Computer Aided Design	2	0
ChE-439	Process Analysis and Optimization	2	0
ChE-440	Chemical Safety and Security	2	0
ChE-441	Process Equipment Malfunction	2	0





## DEPARTMENT OF POLYMER ENGINEERING

### Dean

Prof. Dr. Ing. Naveed Ramzan

### Associate Professors

Dr. Atif Javaid  
 Dr. Farhan Saeed  
 Dr. Muhammad Sarfraz  
 Dr. Yasir Qayyum Gill  
 Dr. Rabia Nazar

### Assistant Professors

Dr. Muhammad Farooq  
 Dr. Umer Mehmood  
 Dr. Muhammad Aamir Shehzad

### Lecturer

Engr. Nida Abid

### Chairman

Prof. Dr. Asif Ali Qaiser

### IPFP Fellow

Dr. Zaman Tahir

### Introduction

Polymer Engineering is an emerging field of research and industrial commercialization, finding a widespread and fast-growing use, ranging from the consumer market to specialized industrial and defense applications. In Pakistan, polymer industry is one of the fastest growing sectors that needs trained manpower and research support. Keeping this in view, the undergraduate degree program in Polymer and Process Engineering was launched in 2002 under Polymer Engineering Division of Department of Chemical Engineering. As a result of a far-reaching ambition, and keen vision which led to the realization of the increasingly important role that Polymer Engineering plays in the world today, the university decided to upgrade the division into an independent degree awarding department in January 2006. Further to this development, MSc Polymer & Process Engineering was started in 2007 and PhD Polymer Science & Engineering in 2019.

The Department of Polymer and Process Engineering has already gained considerable prestige and standing in the academician and industrial world due to motivated and outstanding faculty, hardworking and dedicated administration, and state-of-the-art laboratories costing more than Rs. 160 Million.

### Programs being offered

The Department offers following degree programs:

- B.Sc. Polymer Engineering
- M.Sc. Polymer and Process Engineering
- M.S. Polymer Science and Technology
- Ph.D. Polymer Science and Engineering



**Departmental Core Strengths**

- Well established industrial liaison in terms of job placement and research projects
- Highest number of PhD qualified faculty
- Research oriented product development in Final Year Projects
- Efficient research clusters in polymer membranes, polymer processing and recycling, renewable energy, and elastomeric materials
- A Dynamic Society of Polymer Engineers and Technologists (SPET) to promote social and extra-curricular activities

**Program 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 tests, 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 the 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.

All these areas have applications and relevance to the polymer manufacturing industry and various research organizations in public sector. Our goals are to advance scientific and engineering knowledge in these areas, to disseminate the information, and 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**

The Departmental Laboratories fall into four categories:

- Undergraduate Teaching Laboratories
- Research Laboratories
- Industrial Testing and Product Development
- Process Engineering Laboratories

**1. Undergraduate Teaching Laboratories**

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

**2. Research Laboratories**

Electrochemical and Energy System Testing  
Polymer Analysis & Characterization  
Polymer Composites and Blends  
Membrane Synthesis and Testing

**3. Industrial Testing & Product Development**

Plastic Pipe Testing and Quality Assurance  
Flexible Packaging and Films Testing  
Plastic Materials and Products Testing under ASTM, ISO & PS Standards  
Paints and Adhesive Testing

**4. Process Engineering Laboratories**

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

**Strong Internship Program**

The productive collaboration with the industry has resulted in ample internship opportunities for our students. The Department provides 100 % internship to its 4th year students and many juniors, as well.

**Careers in Polymer & Process Engineering**

Polymers have numerous possibilities in consumer, structural, electrical, mechanical, and medical applications due to their unique physical properties and ability to be tailored through chemistry, cross-linking, and surface modification. Polymers are the most rapidly growing sector of the materials industry. As polymer production has grown, so has the number of people who work in this field. Our graduates find jobs in:

- Polymer producing companies such as PVC, PET, and other resins
- Polymer packaging industries
- Plastic product industry
- Plastic (PVC, PPRC etc.) pipe making industries
- Automotive, foams, paints, and flexible films industries etc.
- Elastomers, tires etc.
- Research and product development in polymer synthesis (current hot topics include biodegradable polymers and compatibilizers for recycling polymers)

The reception by the industry to our graduates in the past years has been remarkable and the demand is ever-growing. Some of the employers of our graduates are Packages Pvt. Limited, Engro Polymer Karachi, Descon Engineering Pvt. Limited, Attock Oil Refinery, Pakistan Petroleum, National Refinery, Fauji Fertilizer Company, Fatima Fertilizers, Engro Fertilizers, Lotte PTA, Popular Pipes, Panther Tires and Service Industries Pvt. Ltd., Awan Sports, Roshan Packages, SPEL, Bin Rasheed, Popular Pipes.

Our graduates find a promising scope in higher studies both in Pakistan and overseas. The advanced and multidisciplinary nature of B.Sc. Polymer Engineering Degree has exceptional acceptability, particularly in the overseas academic world. Each year, a number of our graduates proceed abroad on scholarship pursuing their higher studies.



**B.Sc. Polymer Engineering (Exemplar)**

Year 1							
Semester 1			Semester 2				
Course Code	Subject (Pre-Requisite)	Credit Hours		Course Code	Subject (Pre-Requisite)	Credit Hours	
		Th	Pr			Th	Pr
PPE-107	Engineering Materials	3	0	PPE-108 & PPE-108L	Fundamentals of Polymer Engineering	3	1
HU-111L	Communication Skills	0	1	PPE-109	Industrial Stoichiometry	3	0
CS-103	Introduction to Computer Programming for Data Science	2	1	PPE-110 & PPE-110L	Particle Technology	2	1
CY-161	Polymer Chemistry-I	2	1	MA-118	Applied Mathematics & Statistics	3	0
MA-113	Calculus and Analytical Geometry	3	0	ME-100L	Workshop Practice	0	1
IS-101	Islamic and Pakistan Studies-I or HU-101 Ethics and Pakistan Studies-I	3	0	EE-102 & 102L	Applied Electricity	3	1
QT-101	Translation of the Holy Qur'an-I	1	0				
Year 2							
Semester 3			Semester 4				
Course Code	Subject (Pre-Requisite)	Credit Hours		Course Code	Subject (Pre-Requisite)	Credit Hours	
		Th	Pr			Th	Pr
PPE-207 & PPE-207L	Fluid Flow	3	1	PPE-211 & PPE-211L	Heat Transfer	3	1
PPE-208 & PPE-208L	Polymer Structures & Synthesis (CY-161)	3	1	PPE-212	Environmental Engineering & Process Safety	3	0
PPE-209	Chemical & Petrochemical Industries	3	0	PPE-213 & PPE-213L	Polymer Processing Operations (PPE-108)	3	1
PPE-210	Thermodynamics	3	0	PPE-215	Engineering Economics	3	0
HU-221L	Technical Writing & Presentation Skills	0	1	PPE-214L	Process Engineering Computing	0	1
QT-201	Translation of the Holy Qur'an-II	1	0	IS-201	Islamic and Pakistan Studies-II or HU-201 Ethics and Pakistan Studies-II	3	0
Year 3							
Semester 5			Semester 6				
Course Code	Subject (Pre-Requisite)	Credit Hours		Course Code	Subject (Pre-Requisite)	Credit Hours	
		Th	Pr			Th	Pr
PPE-313 & PPE-313L	Mass Transfer	3	1	PPE-318 & PPE-318L	Polymer Analysis & Characterization (PPE-108)	3	1
PPE-314	Mechanical Properties of Polymers (PPE-108)	3	0	PPE-319 & PPE-319L	Instrumentation & Control	3	1
PPE-315 & PPE-315L	Polymer Reaction Engineering (PPE-208)	3	1	PPE-320	Polymer Composites	3	0
PPE-316	Polymer Compounding & Blending (PPE-108)	3	0	PPE-321	Polymer Rheology	3	0
PPE-317	Transport Phenomena	3	0	PPE-322	Total Quality Management	3	0
QT-301	Translation of the Holy Qur'an-III	1	0				
Year 4							
Semester 7			Semester 8				
Course Code	Subject (Pre-Requisite)	Credit Hours		Course Code	Subject (Pre-Requisite)	Credit Hours	
		Th	Pr			Th	Pr
PPE-418	Entrepreneurial Management	3	0	PPE-414	Polymer Product Design (PPE-108)	3	0
PPE-416	Final Year Project-I (PPE-318)	0	3	PPE-415 & PPE-415L	Polymer Processing Design & Simulation (PPE-213)	3	1
PPE-413 & PPE-413L	Process Plant Design (PPE- 207,211,313,315)	3	1	PPE-417	Final Year Project-II (PPE-416)	0	3
PPE-4XX	Elective-I	3	0	PPE-4XX	Elective-III	3	0
PPE-4XX	Elective-II	3	0	PPE-4XX	Elective-IV	3	0
QT-401	Translation of the Holy Qur'an-IV	1	0				

**Departmental Electives – 12 Credit Hours**

PPE-419 Smart Polymers	3(3,0) No Pre-requisite	PPE-420 Mold Design & Fabrication	3(3,0) PPE-213
PPE-421 Polymers in Energy Applications	3(3,0) No Pre-requisite	PPE-422 Nanotechnology	3(3,0) No Pre-requisite
PPE-423 Polymer Packaging	3(3,0) No Pre-requisite	PPE-424 Polymer Coating & Adhesives	3(3,0) No Pre-requisite
PPE-425 Industrial Membranes Technology	3(3,0) No Pre-requisite	PPE-426 Recycling & Waste Management	3(3,0) No Pre-requisite
PPE-427 Polymers in Automotive Applications	3(3,0) No Pre-requisite	PPE-428 Fiber Technology	3(3,0) No Pre-requisite
PPE-429 Additive Manufacturing	3(3,0) No Pre-requisite	PPE-430 Biopolymers	3(3,0) CY-161
PPE-431 Polymeric Foams	3(3,0) No Pre-requisite	PPE-432 Elastomeric Materials	3(3,0) No Pre-requisite



## DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

### Dean

Prof. Dr.-Ing Naveed Ramzan

### Chairman

Prof. Dr.-Ing Furqan Ahmed

### Professor

Dr. Muhammad Asif Rafiq

### Associate Professors

Dr. Muhammad Zain Ul Abdein

Dr. Ehsan Ul Haq

Dr. Adnan Maqbool

### Assistant Professors

Dr.-Ing. Muhammad Zubair

Dr.-Ing. Khushnuda Nur

### Lecturers

Engr. Amjad Ali

Engr. Syed Farrukh Alam Zaidi\*

(\*on higher studies abroad)

### Mission

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

### Introduction

The department of Metallurgical and Materials Engineering (MME) was established in 1965 and it is the oldest department in this field in the country. Since its inception it has been providing the students with high quality education and training in the field of modern materials. A well-trained and dedicated faculty together with well-equipped laboratories makes it one of the most accomplished departments. The total enrollment of students in the department is around 200.

### Program Educational Objectives (PEOs)

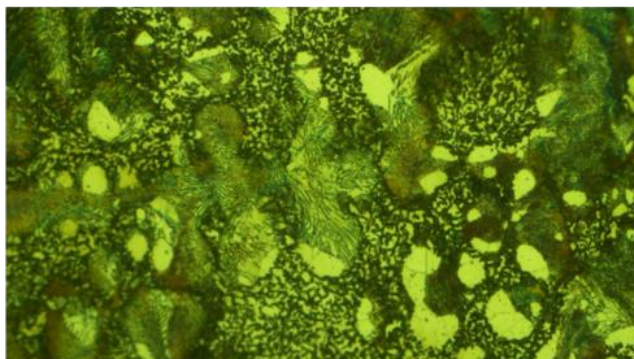
- **PEO-01:** Generate sustainable solutions to the industrial and analytical problems related to metallurgy and materials engineering using contemporary tools and techniques.
- **PEO-02:** Work in teams with effective leadership, entrepreneurial and communication skills.
- **PEO-03:** Achieve professional development while demonstrating socio-ethical responsibility.



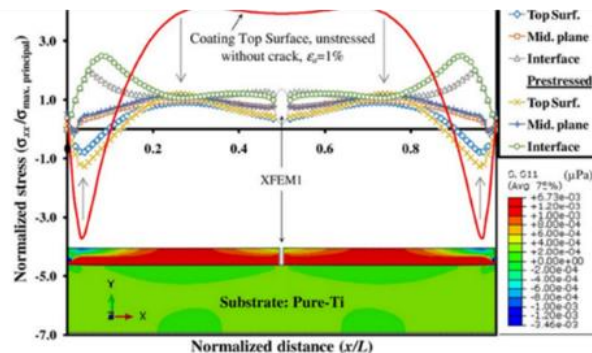
## Courses of Study

The courses have been designed to produce graduates with strong understanding of science and engineering concepts of both metals and modern materials. The part of metallurgy covers courses ranging from relevant concepts of extractive, industrial, physical, mechanical metallurgy to the science and design of different modern metals and alloys used in engineering applications. Special emphasis is made on Foundry & Steel making practices, destructive and non-destructive testing, corrosion and control, heat treatment of metals/alloys, metal working and welding processes. In the area of materials engineering, courses are offered with the focus on material synthesis, processing, and their characterization. Students are taught the fundamentals and trained for the refinement, selection, processing and design of modern materials including polymers, ceramics, electronic materials, functional materials, bio-materials, nanomaterials, and composites. Students and the faculty of the MME department are also actively engaged in the modern-day research activities on structural and functional materials. Moreover, a close co-operation with local industry is maintained by the Department to build a strong academia-industry relationship.

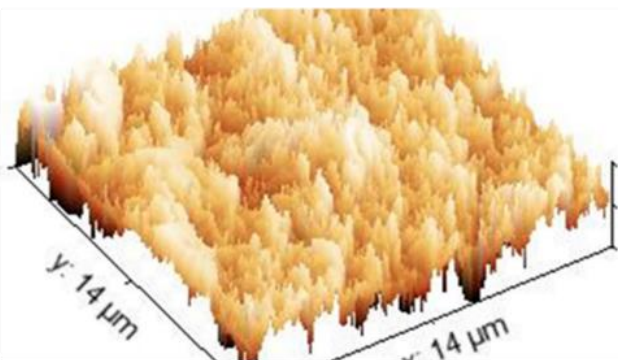
Microstructure of Gray Cast Iron



Simulation of mechanical response of diamond coated Ti and Ti-6Al-4V



Highlights of industry-academia co-operation and research activities



AFM image showing surface topography



Meeting of Industrial Advisory Board with Vice Chancellor and MME Faculty

In order to maintain a professional standard; exposure to an integrated knowledge based on mathematics, chemistry, physics and management sciences is also emphasized. Instructional tours to metallurgical & material development industries, and research organizations are frequently arranged to help the students to relate their theoretical knowledge with industrial practices. Educational / technical seminars are regularly arranged by inviting national and international speakers from the industrial and R&D sectors to keep the students up to data with the global challenges and market demands. The students are also engaged in internships with different metallurgical and materials related organizations every year for practical training. The internships help the students to develop their academic

concepts and prepare themselves to tackle the practical problems of the industry. Extra focus is made on developing the soft and management skills of the students to make them well prepared for the future goals. The students are regularly engaged in several extra- and co-curricular activities to improve their interpersonal, soft, technical and management skills.



Workshops and Seminars for MME Students



Industrial Visits by MME Students

The 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 and Microscopy
- Foundry Engineering
- Computer
- Heat Treatment
- Mechanical Workshop

The department has a library with over thirteen hundred handbooks, textbooks, and reference books for the faculty members and students. The library is provided with internet facility to access the HEC digital library and research articles from national and international web sources. The department has a computer laboratory that is equipped with latest hardware to handle advance modeling, simulation and other technical software for the students to have hands on experience on the modern tools of materials engineering.

### Careers in Metallurgical and Materials Engineering

Career opportunities in Metallurgical and Materials Engineering both at home and abroad are excellent. The engineers in this field can find jobs in sectors like defense, steel, foundry, glass and ceramics, polymer, automotive, metal working and fabrication, nuclear, construction, inspection and testing, oil and gas, corrosion and prevention etc. Our notable graduates are working in leading organizations like TWI, Bosch, P&G, Schlumberger, KRL, SNGPL, OGDCL, PAEC, NESCOM, PINSTECH, NDC, PMO, Descon, different Steel Mills, Foundries PCSIR, PSQCA, PITAC etc. Furthermore, especially in last few years, there is an increasing tendency among students to thrive for scholarships and every year several of our graduates secure well renowned scholarships including Erasmus Mundus, MAP, Marie Curie, DAAD, A\*Star, full bright and many more. Our graduates are studying, serving, and leading in well reputed national and international universities like University of Cambridge, University of Oxford, University of Bristol, National University of Singapore (NUS), Karlsruhe Institute of Technology (KIT), Royal Institute of Technology (KTH), National University of Science and Technology (NUST), Pakistan Institute of Science and Technology (PIEAS), Ghulam Ishaq Khan Institute (GIKI) etc.



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

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
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-104	Mechanics of Materials	3	0
QT-101	Translation of The Holy Quran-I	1	0	MA-112	Applied Mathematics-II	3	0
				CS-103	Introduction of computer programming for data science	2	1
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
MME-202	Applied thermodynamics	3	0	MME-211	Physical Metallurgy (MME-202)	3	1
IS-201	Islamic and Pakistan Studies-II	3	0	MME-205	Iron and Steel Making Processes (MME-213)	3	0
MA-240	Numerical Analysis	2	1	MA-242	Engineering Statistics	3	0
MME-212	Inspection and Quality Assurance	3	1	HU-221	Technical Writing & Presentation Skills	0	1
MME-213	Extractive Metallurgy	2	0	MME-215	Ceramic Materials	3	1
MME-214	Industrial Safety and Environmental Engineering	2	0	MME-216	Mechanical Behavior of Engineering Materials(MME-104)	3	0
QT-201	Translation of The Holy Quran-II	1	0				
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
MME-301	Electrical and Magnetic Materials	2	1	MME-321	Heat Treatment and Phase Transformation (MME-211)	3	1
QT-301	Translation of The Holy Quran-III	1	0	MME-305	Welding and Joining of Materials	3	1
MME-304	Process Control and Instrumentation	2	0	MME-306	Industrial and Financial management	3	0
MME-308	Characterization of Engineering Materials (MME-211)	3	0	MME-307L	Computational Methods in Materials Engineering (MME-216)	0	2
MME-313	Foundry Engineering	3	1	MME-315	Powder Metallurgy	2	0
MME-314	Polymeric Materials	3	1	MME-316	Corrosion and Corrosion Control	3	1
MME-325	Advanced Ceramics (MME-215)	3	0				
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
MME-420	Solidification of Metals and Alloys (MME-313)	3	1	MME-403	Composite Materials	3	1
QT-401	Translation of the Holy Quran-IV	1	0	MME Elective-3	Engineering Elective 03	2	0
MME-426	Metal Working and Removal processes (MME-216)	3	0	MME Elective-4	Engineering Elective 04	2	0
MME-Elective-1	Engineering Elective 01	2	0	MME Elective-5	Engineering Elective 05	2	0
MME-Elective-2	Engineering Elective 02	2	0	MME Elective-6	Engineering Elective 06	2	0
MME-411	Final Project-I	0	3	MME-412	Final Project-II (MME-411)	0	3

**Engineering Electives:**

MME-401 Nuclear Materials 2(2,0)  
MME-402 Nano Materials 2(2,0)  
MME-405 Surface Science and Engineering 2(2,0)  
MME-406 Bio Materials 2(2,0)

MME-407 Vacuum Technology 2(2,0)  
MME-408 Energy Materials 2(2,0)  
MME-409 Advanced Steels 2(2,0)  
MME-410 High Temperature Materials 2(2,0)

MME-413 Fracture and Failure Analysis 2(2,0)  
MME-414 Functional Materials 2(2,0)  
MME-415 Thin Film Technology 2(2,0)  
MME-416 Additive Manufacturing 2(2,0)



## DEPARTMENT OF MINING ENGINEERING

### Dean

Prof. Dr. Muhammad Zubair Abubakar

### Chairman

Dr. Shahab Saqib

### Professor

Dr. Zulfiqar Ali

### Associate Professors

Dr. Shahab Saqib

Dr. Yasir Majeed

Dr. Muhammad Zaka Emad

### Assistant Professors

Engr. Muhammad Mansoor Iqbal

Dr. Muhammad Azeem Raza

Dr. Muhammad Usman Khan

Dr. Muhammad Badar Hayat

Dr. Muhammad Shahzad

### Introduction

The Department of Mining Engineering was established in 1954 as a 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 program, that is 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.

### Program Educational Objectives (PEOs)

**PEO-01: Mining Engineering Capabilities:** Mining engineering graduates demonstrate sound analytical, technical and design capabilities to cope with latest global advances in mining engineering practices.

**PEO-02: Innovation and Research:** Mining engineering graduates can comprehend, exercise, and innovate solutions to engineering problems, on-going research, and global issues.

**PEO-03: Social and Professional Ethics:** Mining engineering graduates are aware of societal issues and their professional and ethical responsibilities, including health, safety, environmental, and legal aspects and Corporate Social Responsibility (CSR).

**PEO-04: Leadership and Lifelong Learning:** Mining engineering graduates have leadership aptitude, teamwork spirits, and inter-personal skills and embrace lifelong learning to foster individual as well as organizational goals in diverse settings.

### **Courses of Study**

The Department offers the following degree programs:

- a) B.Sc. Mining Engineering
- b) M.Sc. Mining Engineering
- c) M.Sc. Tunneling and Underground Excavation Engineering
- d) 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 National Development Complex (NDC), etc.

### **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 weeks Summer Field Surveying camp and a week-long First Aid Training camp are also compulsory requirements for the completion of the degree program.

### **Laboratory and Other Facilities.**

The department has the following major laboratories:

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

Other facilities include a good departmental library, a computer center and a graduate study room. Some of the key equipment in our department includes a 200-Ton Universal Testing Machine, Rock abrasivity and Brittleness test set-ups and a total station for survey.

**B.Sc. Mining Engineering**

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
MA-113	Calculus & Analytic Geometry	3	0	CS-103	Introduction of Computer Programming for Data Sciences	2	1
ME-122L	Engineering Drawing	0	2	EE-199	Basic Electrical and Electronics Engineering	3	1
MinE-110	Applied Geology	3	1	Phy-116	Applied Physics	2	1
CY-143	Physical and Industrial Chemistry	3	1	HU-111	Communication Skills	0	1
ME-100L	Workshop Practice	0	1	MinE-120	Stratigraphy and Structural Geology	2	1
IS-101	Islamic & Pakistan Studies-I	3	0	MinE-121	Mining Engineering Fundamentals	3	0
				QT-101	Translation of the Holy Quran-I	1	0
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
MA-228	Differential Equations	3	0	MA-234	Linear Algebra	3	0
MA-235	Engineering Mechanics	2	1	MA-242	Engineering Statistics	3	0
CE-231	Fluid Mechanics-I	3	1	ME-220	Mechanics of Materials	3	1
ME-210	Applied Thermodynamics	3	1	HU-221	Technical Writing and Presentation Skills	3	0
IS-201	Islamic & Pakistan Studies-II	3	0	MinE-240	Surveying	3	2
				QT-201	Translation of the Holy Quran-II	1	0
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
Min-E-350	Rock Mechanics	3	1	MinE-352	Mine Power Drainage & Material Handling	3	1
Min-E-351	Mineral Exploration	3	1	MinE-360	Ground Control Engineering	3	0
MA-240	Numerical Analysis	2	1	MinE-361	Underground Mine Design	3	0
MinE-353	Mine Ventilation	3	1	MinE-362	Surface Mine Design	3	0
GeoE-353	Introduction to GIS and Remote Sensing	2	1	MinE-363	Explosives Engineering	3	1
				QT-301	Translation of the Holy Quran-III	1	0
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
IME-371	Engineering Economics	2	0	Min-E-484	Mine Hazards, Safety and Health Management	3	1
MGT-410	Project Management	3	0	#	Social Science Elective*	3	0
MinE-470	Tunneling and Excavation Engineering	3	1	#	Technical Elective <sup>§</sup>	3	0
MinE-473	Mining and Environment	2	0	MinE-483	Mining Law	1	0
MinE-472	Mineral Processing	3	1	MinE-485	Senior Design Project-II	0	3
MinE-475	Senior Design Project-I	0	3	QT-401	Translation of the Holy Quran-IV	1	0

First Aid Training and Field Survey Camp are mandatory.

NOTE :

#: Course number of the offered elective course will be used

\*: From offered Social Science Elective Courses

§: From the offered Technical Elective Courses

**\*Social Sciences Electives:**

Social Science Electives			
Course No.	Courses	Credit Hrs	
		Th	Pr
To be offered by Humanities department	Sociology	3	0
To be offered by Humanities department	Understanding of Psychology and Human Behavior	3	0
MinE-403	Organizational Behavior	3	0
MinE-404	Professional Ethics	3	0
MGT-413	Entrepreneurship	3	0

**\$Technical Electives**

Technical Electives			
Course No.	Courses	Credit Hrs	
		Th	Pr
MinE-421	Coal Technology	3	0
MinE-422	Solution Mining	3	0
MinE-423	Operations Research	3	0
MinE-425	Cement Technology	3	0
MinE-426	Commercial Explosive Handling and storage	3	0
MinE-427	Drilling Technology	3	0



## DEPARTMENT OF GEOLOGICAL ENGINEERING

### Dean

Prof. Dr. Muhammad Zubair Abu Bakar

### Chairman

Prof. Dr. Muhammad Farooq Ahmed

### Associate Professor

Dr. Muhammad Arshad

Dr. Ghulam Mohyuddin Sohail

### Assistant Professors

Ms. Sadia Ismail

Dr. Hafiz Muhammad Awais Rashid

### Lecturers

Mr. Ahsan Mehmood

Ms. Maryum Zameer Khan

Mr. Umer Waqas

Mr. Atif Ismail\*

*\*Study leave abroad*

### Mission

To develop all corridors of knowledge in the areas of geological, geotechnical and energy resources exploration, provide adequate scientific knowledge and engineering skills to the students, enabling them to become leaders in geological engineering practice and research fields for the national and international socio economic development.

### Program Education Objectives (PEOs)

**PEO-01:** Exhibit the proficiency of applying the engineering and scientific knowledge and skills to solve complex geological engineering problems.

**PEO-02:** Communicate effectively and contribute in the project team with leadership qualities.

**PEO-03:** Manifest ethical, environmental and societal responsibilities throughout their professional life.

**PEO-04:** Engage themselves in continuous professional development and learning process.

In the 21st century, the most vital challenge faced is the preservation and efficient utilization of Geo-Space and its resources without disturbing the ecological balance. The Geological Engineering degree program aims to come up with engineering solutions that can meet the challenges in the field of geotechnical engineering, rock mechanics and tunneling, natural energy resources exploration and to give solutions to the environmental impact of groundwater resources. The Geological Engineering discipline was introduced in 2001, for the first time in the country by the University of Engineering and Technology, Lahore, under the Mining Engineering Department. In view of the national demand and popularity of the degree program, an independent Department of Geological Engineering was established in January 2006.



The primary objective of the program is to provide professional engineers in the field of:

1. Rock Engineering and Geotechnical Engineering
2. Natural Energy Resources Exploration
3. Geoenvironmental Engineering

The department is currently offering the following degrees.

1. B.Sc. Geological Engineering
2. M.Sc. Geological Engineering
3. M.Sc. Geological Sciences
4. Ph.D. Geological Engineering

### Field Visits and Instructional Tours

Field visits and instructional tours are an essential part of B.Sc Geological Engineering degree program. The department arranges a number of instructional tours to different areas where students are exposed to various aspects of this degree program and beautiful landscapes. In such an environment, students learn professional skills enthusiastically and relish the field trips. In addition to instructional tours, survey and field geology camps are also conducted, which are considered mandatory for completing 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, Neelum Jehlum, etc.), different oil/gas drilling rig sites and visits to different construction sites. These tours give the students necessary exposure to the natural field conditions and prepare them to work in the field. Sometimes the students with an exceptional academic record can get the opportunity to visit abroad for advanced learning under funding offered by international agencies.

### Liaison/Internship with Industry

The department has established continuing links with the 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, PPL, NURICON, Punjab Mineral Company, etc., also offer internships and job

### Collaboration with International Universities

The Department of Geological Engineering is currently collaborating with Saitama University, Japan. This research and academic collaboration mainly focus on promoting joint research projects and the exchange of faculty and students between the Department of Geological Engineering and the Department of Civil and Environmental Engineering, Saitama University, Japan.

### Departmental Laboratories

- Engineering Geology
- Geotechnical Engineering
- Geophysics
- Excavation Engineering
- Hydrogeology
- Geoenvironmental Engineering
- Physical Geology
- Mineralogy and Petrology
- Computing

### Key Research Areas

- Engineering Geology
- Geotechnical and Geo-Mechanics
- Geophysical Exploration
- Non-Explosive Rock Fragmentation
- Tunnel Design and Mechanical Excavation
- Geotechnical Instrumentations
- Geoenvironmental Engineering
- Hydrogeology and Environment
- Drilling and Petrophysical Well Logging
- Formation Evaluation
- Petroleum Geomechanics
- Shale Gas/Oil Shale Reservoir Characterization



**B.Sc. Geological Engineering**

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
EE-199	Basic Electrical and Electronics Engineering	3	1	PHY-117	Applied Physics	2	1
MA-113	Calculus and Analytical 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
Geo-E-122L	Engineering Drawing and Graphics	0	2	CS-103	Introduction to Computer Programming for Data Science	2	1
Geo-E-110	Physical Geology	3	1	HU-111	Communication Skills	0	1
QT-101	Translation of the Holy Quran-I	1	0	ME-100L	Workshop Practice	0	1
				IS -101	Islamic and Pakistan Studies-I	3	0
				Geo-E-121	Occupational Health and Safety	1	0

Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
HU-221	Technical Writing and Presentation Skills	3	0	MA-240	Numerical Analysis	2	1
MA-235	Engineering Mechanics	2	1	Min -E-240	Surveying	3	2
MA-242	Engineering Statistics	3	0	ME-220	Mechanics of Materials	3	1
ME-238	Thermodynamics	2	1	CE-231	Fluid Mechanics-I	3	1
Geo-E-230	Mineralogy and Petrology	2	1	QT-201	Translation of the Holy Quran-II	1	0
IS -201	Islamic and Pakistan Studies-II	3	0				

Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
Geo-E-350	Engineering Geology	3	1	Min-E-350	Rock Mechanics	3	1
Geo-E-351	Geotechnical Engineering I	3	1	Geo-E-362	Earthquake Seismology and Risk Assessment	2	1
Geo-E-352	Petroleum Geology	2	1	Geo-E-363	Explosive Engineering and Construction Blasting	2	0
Geo-E-353	Introduction to GIS/RS	2	1	Geo-E-364	Introduction to Geophysical Exploration Techniques	2	1
Geo-E-354	Hydrogeology	3	1	QT-301	Translation of the Holy Quran-III	1	0
				MGT-317	Project Management in Engineering	3	0
				MGT-319	Entrepreneurship for Engineers	1	0

Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
Geo-E-xxx	Major Elective I	3	1	Geo-E-482	Environmental Geological Engineering	3	1
Geo-E-xxx	Major Elective II	2	1	Geo-E-xxx	Major Elective-III	2	1
Geo-E-477	Drilling Engineering	2	1	Geo-E-xxx	Major Elective-IV	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	QT-401	Translation of the Holy Quran-IV	1	0
				CS-462	Data Mining	3	0

**LIST OF MAJOR BASED CORE (DEPTH)  
ELECTIVES COURSES**

These are proposed engineering elective courses and the HEIs may further add or choose courses as per their program objectives and needs.

MAJOR ELECTIVE – 1			MAJOR ELECTIVE – 2		
<b>Geotechnical and Rock Engineering (GRE)</b>	<b>Natural Energy Resource Exploration (NERE)</b>	<b>Geo-Environmental Engineering (GEE)</b>	<b>Geotechnical and Rock Engineering (GRE)</b>	<b>Natural Energy Resource Exploration (NERE)</b>	<b>Geo-Environmental Engineering (GEE)</b>
Geotechnical Engineering–II (Geo-E-472) (Pre-requisite Geo-E-351)	Reservoir Engineering (Geo-E-473)	Environmental Impact Assessment and Management (Geo-E-474)	Geotechnical Site Investigation (Geo-E-461)	Seismic Data Processing and Interpretation (Geo-E-479)	Risk Assessment in Environmental Studies (Geo-E-464)
Statistical Methods in Geology and Engineering (Geo-E-476)	Resource Engineering (Geo-E-496)	Exploration and Environmental Geochemistry (Geo-E-478)	Fluvial Processes (Geo-E-462)	Surficial Processes, Sedimentation and Stratigraphy (Geo-E-463)	Geological Aspects of Hazardous Waste Management (Geo-E-465)

MAJOR ELECTIVE – 3			MAJOR ELECTIVE – 4		
<b>Geotechnical and Rock Engineering (GRE)</b>	<b>Natural Energy Resource Exploration (NERE)</b>	<b>Geo-Environmental Engineering (GEE)</b>	<b>Geotechnical and Rock Engineering (GRE)</b>	<b>Natural Energy Resource Exploration (NERE)</b>	<b>Geo-Environmental Engineering (GEE)</b>
Ground Improvement and Geosynthetics (Geo-E-495)	Petrophysics and Well Logging (Geo-E-483) (Pre-requisite Geo-E-352)	Environmental Soil Science (Geo-E-494)	Pavement and Foundation Engineering (Geo-E-481)	Production Engineering (Geo-E-488)	Environmental Data Analysis (Geo-E-489)
Geomorphology and Terrain Analysis (Geo-E-484)	Petrogenesis and Metallogenesis (Geo-E-486)	Site Remediation Engineering (Geo-E-487)	Analysis of Rock Structures (Geo-E-491)	Carbonate Sedimentology (Geo-E-492)	Recycling and Sustainable Engineering (Geo-E-493)



## DEPARTMENT OF PETROLLEUM & GAS ENGINEERING

### Dean

Prof. Dr. Muhammad Zubair Abubakar

### Chairman

Prof. Dr. Muhammad Khurram Zahoor

### Associate Professor

Dr.- Ing. Faisal Mehmood

### Assistant Professors

Azam Khan

Dr.- Ing. Muhammad Haris

Dr. Arshad Shehzad Ahmad Shahid

### Lecturers

Muhammad Rizwan Latif

Muhammad Kashif Ali

Hasan Jehanzaib

Mahwish Akram

### Introduction

The Department of Petroleum & 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 & 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 almost two decades that the department started the postgraduate programs and has since strengthened its research capabilities over the years. The department offers degree program at Undergraduate and Postgraduate levels in Petroleum & Gas Engineering. Recently the Petroleum & Gas Engineering program at UET Lahore has been ranked (51-100) in the world by prestigious QS Ranking. This makes Department of Petroleum & Gas Engineering at UET, Lahore the first ever department (of any discipline) in Pakistan to achieve this feat. It is all because of continuous support of university administration, faculty, and students.

### Mission

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

### **Program Education Objectives (PEOs)**

**PEO-01:** To equip graduates with updated engineering knowledge and research skills for examining and solving complex industry problems.

**PEO-02:** To enhance graduates' interpersonal, teamwork and management skills while focusing on socio-economic development in an eco-friendly manner.

**PEO-03:** To develop an aptitude for lasting personal capacity-building through continued professional development, along with integrity and a sense of ethical norms and values.

The curriculum is diversified and includes 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 petroleum engineering profession. Students are provided opportunities to visit oil and gas fields to familiarize themselves with the tasks and operations they have to undertake in their professional career.

### **Laboratories & Other Facilities**

The department has following laboratories to meet academic, and research needs of both students and faculty members:

- Petroleum Reservoir Fluids
- Petrophysics
- Drilling Engineering
- Computer/Reservoir Simulation
- Integrated Petroleum Engineering

The department has the facility of a well-stocked library as well. The library is features with more than 2000 books. The Japanese aid through JICA Program for laboratory equipment resulted in upgraded laboratories. Apart from university merit scholarships, students have opportunity to avail scholarship from the local industry, District Government and Zakat Fund. Majority of students get financial 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 have the opportunity to carry out comprehensive research projects related to practical industrial problems as part of their final year projects.

The graduates of the department have been offered well-paid positions in national and multinational companies. Doors of jobs are open for the graduates of the department worldwide as well. Many graduates of the department are serving worldwide including the Middle East, Europe, North America, Africa, etc.

### **Liaison with the Industry**

A 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 the institution must have live coordination with relevant industry, so is true for the Department of Petroleum & Gas Engineering. Despite the fact that petroleum industry of Pakistan is clustered in Islamabad and Karachi, the department has successfully managed to establish and strengthen effective coordination.

Students are exposed to the industry through instructional tours, seminars by field experts and summer internships. Thanks to the industry support, majority of our third year and final year Undergraduate students avail summer internships.

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

Year 1

Semester 1

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Pet. E-101	Fundamentals of Petroleum Engineering	3	0
CS-103	Introduction to Computer Programming for Data Science	2	1
HU-111	Communication Skills	0	1
MA-123	Calculus	3	0
ME-120L	Engineering Drawing & Graphics	0	1
Min. E-110	Applied Geology	3	1

Semester 2

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
QT-101	Translation of Holy Quran-I	1	0
Pet. E-102	Petroleum Geology & Geophysics	3	0
Pet. E-103	Occupational Health and Safety	1	0
CY-171	Petroleum Chemistry	2	1
IS-101	Islamic & Pakistan Studies-I	3	0
MA-129	Vector and Complex Analysis	3	0
ME-100L	Workshop Practice	0	1
Phy-115	Applied Physics	2	1

Year 2

Semester 3

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
QT-201	Translation of Holy Quran-II	1	0
Pet. E-203	Petrophysics (Pet. E-101)	2	1
Pet. E-204	Drilling Engineering-I (Pet. E-101)	3	1
CE-216	Strength of Materials	2	1
EE-201	Electrical Engineering and Electronics	2	1
IS-201	Islamic & Pakistan Studies-II	3	0

Semester 4

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Pet. E-205	Properties of Reservoir Fluids (Pet. E-101)	3	1
CE-233	Fluid Mechanics	2	1
Ch. E-251	Applied Thermodynamics	3	1
HU-221	Technical Writing & Presentation Skills	3	0
MA-225	Differential Equations and Transforms	3	0

Year 3

Semester 5

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
QT-301	Translation of Holy Quran-III	1	0
Pet. E-313	Well Logging (Pet. E-203)	2	1
Pet. E-314	Reservoir Engineering (Pet. E-203)	3	1
Pet. E-322	Natural Gas Processing & Pipeline Management	3	1
MA-343	Applied Probability and Statistics	3	0
MA-346	Numerical Methods	3	0

Semester 6

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Pet. E-306	Drilling Engineering-II (Pet. E-204)	3	1
Pet. E-315	Petroleum Production Engineering-I (Pet. E-205)	3	1
Pet. E-317	Petroleum Economics & Risk Analysis	3	0
Ch. E-351	Chemical Technology of Petroleum	3	1
	Natural Science/ Math Electives	2/3	1/0

Year 4

Semester 7

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Pet. E-422	Principles of Reservoir Simulation (Pet. E-314)	2	1
Pet. E-424	Well Testing (Pet. E-203)	2	1
Pet. E-425	Petroleum Production Engineering-II (Pet. E-315)	3	1
Ch. E-453	Environment & Safety	2	1
Pet. E-491	Project (Phase-I)	0	3

Semester 8

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
QT-401	Translation of Holy Quran-IV	1	0
Pet. E-421	Field Operations in Petroleum Engineering	3	0
Pet. E-423	Reservoir Management (Pet. E-314)	2	1
Pet. E-429	Principles of Enhanced Oil Recovery (Pet. E-313)	3	1
Pet. E-492	Project (Phase-II) (Pet. E-491)	0	3
MGT-413	Entrepreneurship	3	0



## DEPARTMENT OF ARCHITECTURE

### Dean

Prof. Dr. Rizwan Hameed

### Chairperson

Dr. Munazzah Akhtar

### Professor Emeritus

Prof. Dr. Neelam Naz

### Associate Professors

Dr. Munazzah Akhtar  
Ms. Quratulain Asghar

### Assistant Professors

Dr. Shama Anbrine  
Dr. Malik Usman Mehmood Awan  
Dr. Mamuna Iqbal  
Ms. Madiha Zaman

Ms. Qudsia Asif  
Ms. Rabia Ahmed Qureshi  
Mr. Adnan Jalil  
Dr. Maryam Siddiq

### Lecturer

Ms. Hina Nabeel  
Mr. Afnan Ahmed

The Department of Architecture has a history spanning over 60 years. Established in 1962, it has the distinction of offering the first-degree program of Architecture in Pakistan. Thus, the Department has been a fundamental contributor towards the founding and establishment of the profession of Architecture in the country. By now it has a large body of alumni with nearly 1600 graduates, and through them, it has the honour and credit of shaping a significant part of the current built environment in 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 school/department of architecture in the country. The Department, thus has not only maintained its leading role in architectural education, it is set to further expand its frontiers through specializations it offers through its Masters and Ph.D. program.

The programmes offered in the department are listed as below:

- a) Bachelor of Architecture (B.Arch)
- b) Master of Architecture (M.Arch)
- c) 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.

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.

**Objective**

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.

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 participate in the national and provincial activities under the patronization of Pakistan Council of Architects and Town Planners (PCATP) and Institute of Architects, 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

## Year 1

## Semester 1

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch:101	Basic Design – I	0	5
Arch:105	Materials and Construction – I	1	1
Arch:106	History of Civilizations	2	0
Arch:107	Free Hand Sketching	0	2
CE: 101	Elementary Surveying	3	1
HU: 111	Communication Skills	0	1
QT- 101	Translation of the Holy Quran	1	0

## Semester 2

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 111	Basic Design – II	0	5
Arch: 117	Structural Systems – I	1	1
Arch: 116	History of Architecture – I	2	0
Arch: 119	Architectonics	0	3
Arch: 118	Architectural Graphics– I	0	3
HU/IS: 101	Islamic and Pakistan Studies– I	3	0

## Year 2

## Semester 3

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 201	Architectural Design – I	0	6
Arch: 207	Structural Systems – II	1	1
Arch: 205	History of Architecture – II	2	0
Arch: 204	Architectural Graphics– II	0	2
Arch: 206	Environmental Control-I	2	1
HU/IS-202	Islamic & Pak Studies-II	3	0

## Semester 4

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 211	Architectural Design – II	0	6
Arch: 215	Materials and Construction– II	1	1
Arch: 218	History of Architecture – III	2	0
Arch: 214	Architectural Graphics– III	0	2
Arch: 216	Environmental Control– II	2	1
Arch: 217	Computer Application in Architecture– I	0	2
QT-201	Translation of the Holy Quran	1	0

## Year 3

## Semester 5

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 304	Architectural Design–III	0	7
Arch: 302	Building Services	2	1
Arch: 303	Environmental Psychology	2	0
Arch: 306	Energy Efficient Architecture	2	1
Arch: 307	Computer Application in Architecture –II	0	2
HU:211L	Technical Writing and Presentation Skills	0	1

## Semester 6

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 314	Architectural Design–IV	0	7
Arch: 312	Architectural Working Drawings	0	2
Arch: 315	Theory of Architecture	2	0
Arch: 317	Interior Design	2	1
Arch: 318	Computer Application in Architecture –III	0	2
QT-301	Translation of the Holy Quran	1	0

## Year 4

## Semester 7

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 401	Architectural Design–V	0	8
Arch: 403	History, Theory & Criticism	2	0
Arch: 406	Research & Report Writing	2	0
Arch: 407	Landscape Design	2	1
Arch: 409	Urban Design	2	0
CS-103	Introduction to Computer Programming for Data Science	2	1

## Semester 8

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 411	Architectural Design–VI	0	8
Arch: 413	Architecture in Pakistan	2	0
Arch: 417	Conservation of Historic Buildings	2	0
Arch: 419	Urban Design Studio	0	2
Arch: 416	Elective – I a. Architecture and Digital Fabrication b. Climate Change and the Built Environment c. Entrepreneurship in Architecture	2	0
QT-401	Translation of the Holy Quran	1	0

## Year 5

## Semester 9

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 501	Thesis Design–I	0	10
Arch: 502	Project Management	2	1
Arch: 503	Elective –II a. Theories of Digital Design b. Housing Issues in Pakistan for Architects c. Architectural Photography	2	0

## Semester 10

Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
Arch: 515	Elective –III a. Earthquake Architecture b. Sustainable Architecture c. Anthropology	2	0
Arch: 516	Architectural Practice and Ethics	2	1
Arch: 599	Thesis Design–II	0	11



## DEPARTMENT OF CITY & REGIONAL PLANNING

### Dean

Prof. Dr. Rizwan Hameed

### Chairman

Prof. Dr. Shaker Mahmood Mayo

### Lecturer

Dr. Arif Hussain  
Ms. Saima Rafique

### Professors

Dr. Rizwan Hameed  
Dr. Obaidullah Nadeem  
Dr. Shaker Mahmood Mayo  
Dr. Ijaz Ahmad  
Dr. Amer Aziz

### Associate Professors

Dr. Muhammad Asim

### Assistant Professors

Dr. Humaira Tabassum  
Ms. Sadaf Saeed (on study leave)

### Introduction

The Department of City and Regional Planning (DCRP) is contributing to nation building through its graduates since 1962. It is an advanced planning institution in Pakistan, offering top quality education to serve the nation. The Department attracts international students due to its inclusive and vibrant environment. The teaching focuses on equipping the students with all essential skills to prepare them for higher education and ethical professional practice. The faculty is highly educated with many members holding foreign qualifications. They actively conduct research to find innovative solutions to plan and manage human settlements in a sustainable manner. The detail of the department and the faculty can be accessed through university weblink <https://crp.uet.edu.pk/>.

### 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 Higher Education Commission (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 graduates of this



Department are also eligible to get registered with international bodies of professional planners such as, American Planning Association (APA), Royal Town Planning Institute (RTPI), International Society of City and Regional Planners (ISOCARP) etc. This has also enabled several of our graduates to work as city planning and development management experts in various countries of the developed and developing world.

### International Linkages and Collaborations

The Department has also established academic links with other institutions of related fields within Pakistan and abroad. Our Master's degree courses are developed through foreign link programs. The Department has signed various Memorandum of Understandings with national and international organizations and universities, seeking collaboration in the areas of research, teaching and exchange of students and teachers. Recently, the DCRP, in collaboration with Technische Universität Dortmund, Germany, has entered into a 3-years (2022-24) project entitled "Planning in Germany and Pakistan; Responding Challenges of Climate Change through Intercultural Dialogue" funded by DAAD (German Academic Exchange Service). In the continuation of this collaboration, faculty and students of DCRP attend summer school in Technical University of Dortmund, Germany from 12<sup>th</sup> to 21<sup>st</sup> August, 2022.



DCRP organized winter school and international conference in collaboration with Technical University Dortmund, Germany from 19<sup>th</sup> to 23<sup>rd</sup> December, 2022. This event was attended by international delegates of Technical University Dortmund Germany, and University of Philippines, Philippines and faculty members and students of three national level universities i.e. University of Engineering and Technology (UET), Lahore, Lahore College for Women University (LWCU), Lahore and National University of Science & Technology (NUST), Islamabad.

Some other institutions who have collaborated with the Department in the past are:

1. Technische Universität Dortmund, Germany
2. Northumbria University, UK
3. International Emergency Team, UK
4. Punjab Emergency Services, Government of Punjab
5. Technische Universität Berlin, Germany
6. Trier University, Germany
7. Parliamentary SDGs Secretariat, National Assembly of Pakistan
8. Government College University, Lahore
9. University of Liverpool, UK
10. Heriot Watt University, Edinburgh, UK
11. University of Edinburgh, United Kingdom (UK)

### Courses of Study

The Department offers following courses of studies:

1. B.Sc. City and Regional Planning (CRP)
2. M.Sc./M.Phil City and Regional Planning (CRP)
3. M.Sc. Community Development and Environmental Management (CDEM)
4. M.Sc. Disaster Management (DM)



## 5. Ph.D. City &amp; Regional Planning (CRP)

**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 are introduced, considering the market demands, entrepreneurial skills, and cutting-edge technologies.

City and Regional Planning is an interdisciplinary field which deals with the social, economic, and physical aspects of the society and the built environment. Accordingly, the department offers related subjects such as Active Citizenship and Development Planning, Sociology, Entrepreneurship, Finance Planning and Management, Development Economics, Climate Change Adaptation and Disaster Management, Urban Regeneration and Conservation, Master Planning, Estate Management, Transportation Planning, Housing and Urban Development, and Urban Design. Moreover, the students are equipped with related software techniques including ArcGIS, AutoCAD, SPSS, Sketchup, 3D Max, Photoshop, Primavera, EPANET, HCS, TransCAD, Vissim and languages such as Python and C++. Along with these teaching communication skills, survey planning and dealing with people is a crucial part of the training in the department. Therefore, the graduates of this Department are trained not only in planning and engineering subjects but also in management and social sciences.

**Practical Work**

Cities and regions are the real field laboratories for Town Planners and proper functioning of urban planning contribute towards better life standards. Therefore, practical work is included in the course work of four years to train students to deal with real world planning issues.

The assignments consist of data collection from different institutions and public, statistical and theoretical analysis, and preparation of policies and plans for solutions. Notable practical works include preparation of Master Plans, Housing Scheme Planning and Development, Transportation Plans, Urban Regeneration and Conservation Planning, Environmental Planning, Urban Design, Planning for New Towns, Industrial Estate Planning, and Landscape Design. These also involve extensive use of spatial and planning data analysis softwares. Overall, the students are equipped with necessary analytical and presentation skills demanded by the public and private sector employers.

**Opportunities for Field Knowledge**

In order to enable our students to understand complexities of human settlements 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.

Moreover, seasoned Town Planners and allied professionals from various Government departments and private consultancies are also invited to deliver guest lectures both at campus as well as online. The Department also arrange 6-8 weeks internship for 3<sup>rd</sup> and final year undergraduate students to gain hands-on practice in the field of town planning and to become viable and experienced job applicants when seeking employment opportunities after graduation.

**Where are Our Graduates Working?**

During the recent years, City and Regional Planning has emerged as a popular discipline and a profession with very high employment rate. Keeping in view the growing demand of our graduates in Pakistan and abroad, the university has increased the number of seats allocated for its undergraduate programme. Some of the recruiting agencies in the government sector include:

1. Universities offering City & Regional
2. Planning programs
3. Planning Commission of Pakistan
4. Ministry of Housing, Environment and Urban Affairs
5. The Urban Unit, Punjab & Khyber Pakhtunkhwa
6. Punjab Housing and Town Planning Agency
7. Development Authorities (LDA, CDA, MDA, GDA, KDA, GDA, SDA, RDA, RUDA, LCBDDA and the like)
8. Local Government and Community Development Department (Metropolitan/Municipal Corporations, and District Councils)
9. Federal Government Employees
10. Housing Authority
11. Armed Forces (Pakistan Army, Military Engineer Services and Design Directorates)
12. Estate Management Directorates of Civil Aviation Authority and Pakistan Railways
13. NDMA, PDMA and Punjab Emergency Services

14. Rescue 1122
15. Cantonment Boards

Furthermore, there are numerous employment opportunities with the local, national and international NGO's, private planning consultancy firms and land developers. Our graduates are also extensively working in the real estate sector with the private entities such as Graana.com, Zameen.com, Behria Town, DHAs, and other land developers. Thus, the City & Regional Planning professionals hold key portfolios at the local, provincial, and national level institutions.

### **Learning Space Facilitation at the Department**

The department comprises of all necessary facilities which include seminar hall, lecture theatre, drawing studio, computer lab, conference room, research room and library. 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. A state-of-the-art GIS laboratory is recently established with latest desktop computers having Core i7 processors to facilitate use of satellite imageries for spatial data analysis and planning. The computers are connected with a high-speed server based local network and internet facility. The laboratory is also equipped with modern scanning and printing facilities. The department conference room has also been equipped with the video camera to hold the online lectures and meetings.

### **Library and Allied Facilities**

The Department has a well-stocked library with above 3,300 books including 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. 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 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 also available. 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.



**B.Sc. City & Regional Planning**

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
CRP-101	Introduction to City and Regional Planning	3	0	CRP-104	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-106	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-101	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
				QT-101	Translation of The Holy Quran - 1	1	0
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
CRP-201	Environmental Planning and Management	3	1	CRP-206	Sociology	2	0
CRP-202	Architectural Design	1	2	CRP-207	Housing and Urban Development	2	1
CRP-203	Applied Geography	2	0	CRP-208	Transportation Planning	2	1
CRP-204	Information Technology and Database Management	0	3	CRP-209	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-210	Planning Surveys	1	2
				QT-201	Translation of The Holy Quran - 2	1	0
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
EnE-308	Environmental Engineering	3	1	CRP-309	Research Methods	2	1
CRP-304	Planning Law	3	0	CRP-310	Industrial Estate Planning and Design	1	1
CRP-305	Urban Regeneration and Conservation	2	1	CRP-311	Landscape Design	1	1
CRP-306	Planning of New Towns	2	2	CE-301	Building Construction Technology	2	1
CRP-307	GIS Analysis and Applications	1	1	CRP-313	Urban Design	2	1
CRP-308	Climate Change Adaptation and Disaster Management	2	0	CRP-314	Active Citizenship and Development Planning	2	0
				QT-301	Translation of The Holy Quran - 3	1	0
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
CRP-401	Master Planning – I	2	2	CRP-407	Project-II	0	3
MGT-402	Finance Planning and Management	2	1	CRP-408	Master Planning – II	1	2
CRP-403	Project Planning and Management	1	1	CRP-409	Estate Management	1	1
CRP-404	Professional Planning Practice	1	2	CRP-410	Land use and Building Control	2	1
CRP-405	Rural Development Planning	2	0	CRP-411	Regional Planning	2	1
CRP-406	Project –I	0	3	MGT-413	Entrepreneurship	3	0
				QT-401	Translation of The Holy Quran - 4	1	0



## DEPARTMENT OF PRODUCT AND INDUSTRIAL DESIGN

### Dean

Prof. Dr. Rizwan Hameed

### Chairman

Dr.-Ing. Atif Bilal Aslam  
(Associate Professor)

### Assistant Professors

Ms. Fariha Saeed  
Ms. Asma Khalid  
Dr. Salman Asghar  
Ms. Mona Gulzar  
Ms. Anum Shamshad

### Lecturers

Ms. Aisha Hameed  
Ms. Uroosa Naz  
Ms. Neyalish Aman  
Ms. Aiman Amjad

### Introduction

The Department of Product & Industrial Design was established in the year 2006 with the aim to generate professionals in the field of Product Design with technological, managerial, and entrepreneurial skills for the emerging needs of the industry. The department provides standard Product Design education at the bachelor level and commenced a 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 careers after graduation; the graduates will be industrial/product designers, design managers, entrepreneurs, designers for product manufactures, and trading companies' product design consultants.

Broadly speaking, the role of the product designer combines art, science, and technology to create tangible three-dimensional goods. Master Program in Product and Industrial Design involves the research and design of the whole range of consumer and capital products. During a journey of more than one decade, our alumni have acknowledged their roles as team players in various top-notch organizations and industries such as UX/UI design, Master tiles, Packages, TEVTA, and a few international organizations too. Our graduates are also serving various academic organizations and working as freelancers for various business ideas and start-ups.

### Inspiring Innovation, Delivering Success

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

- Have abilities, such as drawing and sketching that support design activity, as well as capability to work with technical information.
- Have the interest to understand the way products and systems relate to people and societies.

- Are interested in technology and 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.

### **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. This degree 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. This program is designed to meet the aspirations of the new generation of young multi-skilled and multi-talented creative entrepreneurs who seek a creative career.

### **Career Opportunities**

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

### **Laboratories**

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

- Computer Lab
- Digital Graphics Lab
- Ceramics Lab
- Wood Lab

Besides, students use the labs in different subjects of engineering discipline for respective experiments. Also the department has a library with recent books and periodicals available for the students.

**B.Sc. Product & Industrial Design**

Year 1							
Semester 1				Semester 2			
Course No	Title	Credit Hours		Course No	Title	Credit Hours	
		Th	Pr			Th	Pr
PID-101	Fundamentals of Design -I	2	2.5	PID-111	Fundamentals of Design -II	2	2.5
PID-102L	Visual Communication - I	0	2	PID-112L	Technical Drawing	0	1.5
PID-103	Materials and Technology – I	2	1	PID-113	Materials and Technology – II	2	1
PID-106	History of Creative Arts and Design – I	1	1	PID-115L	Digital Graphics	0	2.5
PID-105	Introduction to Computers	1	1	ME-100L	Workshop Practice	0	1
IS-101	Islamic and Pakistan Studies -I	3	0	MA-114	Applied Mathematics	3	0
HU-111L	Communication Skills	0	1	QT-101	Translation of the Holy Quran -I	1	0
Year 2							
Semester 3				Semester 4			
Course No	Title	Credit Hours		Course No	Title	Credit Hours	
		Th	Pr			Th	Pr
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-217L	Advance Computer Aided Design	0	2.5
PID-206	History of Creative Art & Design-II	1	1	PID-216	Aesthetics	2	0
PID-205L	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
				QT-201	Translation of the Holy Quran - II	1	0
Year 3							
Semester 5				Semester 6			
Course No	Title	Credit Hours		Course No	Title	Credit Hours	
		Th	Pr			Th	Pr
PID-301	Product Design-III	2	2.5	PID-311	Product Design-IV	2	2.5
PID-302L	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-305L	Computer Modeling & Rendering	0	2.5	ME-229	Mechanics of Materials and Machine Design	3	0
PHY-301	Packaging Physics	2	1	QT-301	Translation of the Holy Quran - III	1	0
Year 4							
Semester 7				Semester 8			
Course No	Title	Credit Hours		Course No	Title	Credit Hours	
		Th	Pr			Th	Pr
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
PID-403	Electives 1. Visual Communication Design (video production) 2. Advanced Ceramics 3. Furniture Design 4. Advertisement Design (print media) 5. Product Development & Manufacturing 6. Interior Design	2	1				
MGT-413	Entrepreneurship	3	0				
QT-401	Translation of the Holy Quran -IV	1	0				



## DEPARTMENT OF CHEMISTRY

### Dean

Prof. Dr. Muhammad Shahid Rafique

### Professor Emeritus

Dr. Fazeelat Tahir

### Chairperson

Prof. Dr. Farhat Yasmeen

### Professor

Dr. Syeda Rubina Gilani

Dr. Aneela Anwar

### Associate Professor

Dr. Humayun Ajaz

Dr. Arjumand Iqbal Durrani

Dr. Aisha Munawar

Dr. Zahoor Ahmad

### Assistant Professor

Ms. Hina Saleem

Dr. Ashi Rashid

Dr. Iqra Munir

### Lecturer

Mr. Asad Abbas

### 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 in 2001. The Ph.D. program was started in 2004. In 2020, BS Chemistry program started with almost 35 in first intake.

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 well-stocked Library and I.T, Computer Laboratory to facilitate the students.

## B.Sc. Chemistry

Year 1							
Semester 1			Semester 1				
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
HU-111	Communication Skills	0	1	HU-221	Technical Writing and Presentation Skills	3	0
IS-101	Islamic Studies/Pak studies I	3	0	IS-201	Islamic Studies/Pak studies II	3	0
Math-101	Calculus I	3	0	Math-105	Statistics	3	0
CS-101L	Computing Fundamentals	0	1	CY-141	Biochemistry and Biotechnology	3	0
Phys-101	Mechanics	3	0	MGT-100	Introduction to Business	3	0
CY-151	Introduction to Physical Chemistry	2	0	CY-111	Introduction to Analytical Chemistry	2	0
CY-121	Introduction to Inorganic Chemistry	2	0				
QT-101	Translation of the Holy Qur'an-I	1	0				
Year 2							
Semester 3			Semester 4				
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
Math-203	Scientific Programming	2	1	CY-253	Physical Chemistry – II	2	1
CY-252	Physical Chemistry – I	2	1	CY-213	Analytical Chemistry II	2	1
CY-222	Inorganic Chemistry – I	2	1	CY-223	Inorganic Chemistry-II	2	1
CY-261	Organic Chemistry-I	2	1	CY-262	Organic Chemistry-II	2	1
CY-201	Environmental Sciences	3	0	QT-201	Translation of the Holy Qur'an-II	1	0
CY-212	Analytical Chemistry 1	2	1	CY-204	Energy Resources of Pakistan and its Management	2	0
				Math-205	Ordinary Differential Equations	3	0
Year 3							
Semester 5			Semester 6				
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
CY-314	Analytical Chemistry-III	3	1	CY-315/CY-331	Analytical Chemistry-IV/ Applied Chemistry	3	1
CY-324	Inorganic Chemistry-III	3	1	CY-325	Inorganic Chemistry-IV	3	1
CY-363	Organic Chemistry-III	3	1	CY-364	Organic Chemistry-IV	3	1
CY-354	Physical Chemistry-III	3	1	CY-355	Physical Chemistry-IV	3	1
QT-301	Translation of the Holy Qur'an-III	1	0	CY-301	Workplace hazardous materials information	2	0
HU-204	Foreign Languages (Any)	1	0				
Year 4							
Semester 7			Semester 8				
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
CY-4--*	Advanced Paper I	3	0	CY-4--*	Advanced Paper IV	3	0
CY-4--*	Advanced Paper II	3	0	CY-4--*	Advanced Paper V	3	0
CY-4--*	Experimental Methods	3	0	CY-4--*	Experimental Methods	3	0
CY-491	Scientific Report Writing	3	0	CY-4--*	Elective Course (Other than the field of specialization)	3	0
QT-401	Translation of the Holy Qur'an-IV	1	0	CY-492	Research Project/Social Services and Report Writing / Additional Paper (3 credit)	0	3
CY-492	Research Project/Internship and Report Writing /Additional Paper)	3	3				

\*Three Courses from the field of specialization (Two Theory and one Experimental Methods) CY-491 Scientific Report Writing (Common to all) (3 Cr Hrs.)  
 CY-492 Research Project/Internship and Report Writing /Additional Paper (3 credit) Total (12 credit hours + 3 credit hour research = 15) 600 Marks

\*Three Courses from the field of specialization (Two theory and one experimental) (9 Cr Hrs.) Elective Course I (Other than the field of specialization (3 Cr Hrs.) CY-492 Research Project/Internship and Report Writing /Additional Paper (3 credit) Total (12 Credit hrs. + 3 Cr hrs. Research) 600 Marks Total Credit hrs. 15; Total Credit Hours 135



**Final Year Subject Specialization**

Final Year Specialization	
Course No.	Specialization Subjects
1&2	Inorganic and Analytical Chemistry
3, 7 & 8	Industrial, Environmental and Polymer Chemistry
4 & 0	Biochemistry and Microbiology
5	Physical and Electrochemistry
6	Organic Chemistry (Organic, Food and Biochemistry)

Inorganic & Analytical Chemistry	
Course No.	Specialization Subjects
CY-411	Spectroscopic Techniques
CY-412	Thermal Analysis
CY-413	Electroanalytical Techniques
CY-414	Statistical Data Handling and Spreadsheets
CY-415	Vacuum Techniques In Analytical Chemistry
CY-416	Physicochemical Methods of Analysis
CY-418	Experimental Methods in Analytical Chemistry I
CY-419	Experimental Methods in Analytical Chemistry II
CY-421	Introduction to Organometallic Chemistry
CY-422	Inorganic Catalysis
CY-423	Principles of Bioinorganic Chemistry
CY-424	Inorganic Chemistry of Main Group Elements
CY-425	Special Topics in Inorganic Chemistry
CY-426	Experimental Methods in Inorganic Chemistry I
CY-427	Experimental Methods in Inorganic Chemistry II

Inorganic & Analytical Chemistry	
Course No.	Specialization Subjects
CY-431	Organic Based Industries
CY-432	Agro Based Industries and Pollution Control
CY-433	Industrial Process Projects of Applied
CY-434	Chemistry Experimental
CY-435	Methods in Industrial Chemistry I
CY-436	Experimental Methods in Industrial Chemistry II
CY-481	Fundamentals of Environmental Chemistry
CY-482	Environmental Toxicology
CY-483	Green Chemistry
CY-484	Environmental Chemistry
CY-485	Environmental Law
CY-486	Projects of energy resources of Pakistan and its management
CY-487	Experimental Methods in Environmental Chemistry
CY-471	Polymer Chemistry

CY-472	Polymer Blends and Composites
CY-473	Degradable Polymeric Materials
CY-474	Polymer Analysis and Characterization
CY-475	Functional Polymeric Materials
CY-476	Experimental Methods in Polymer Chemistry

Organic and Food Chemistry	
Course No.	Specialization Subjects
CY-461	Organic Spectroscopy
CY-462	Heterocyclic and Organometallic Compounds
CY-463	Reaction Mechanism And Reactive Intermediates
CY-464	Natural Products
CY-465	Advance Food Chemistry and Technology
CY-466	Food Laws and Regulations
CY-467	Food Technology in Dairy
CY-468	Experimental Methods in Organic Chemistry
CY-469	Experimental Methods in Food Chemistry
CY-401	Essentials of Microbiology
CY-402	Introduction to Microbiology
CY-403	Chemical Microbiology
CY-441	Structural Biochemistry
CY-442	Biochemistry of Metabolism
CY-443	Informational Macromolecules
CY-444	Bioenergetics
CY-445	Nutritional Biochemistry
CY-446	Advance Protein Chemistry
CY-447	Enzymes and Enzymology
CY-448	Metabolism and Related Diseases
CY-449	Experimental Methods in Biochemistry
CY-404	Experimental Methods in Microbiology

Physical & Electrochemistry	
Course No.	Specialization Subjects
CY-451	Solid State and Material Chemistry
CY-452	Thermodynamics
CY-453	Electrochemistry and Clean Energy
CY-454	Applied Electrochemistry
CY-455	Electro-Kinetics Phenomenon
CY-456	Electrochemical Industrial Processes
CY-457	Quantum Chemistry
CY-458	Physical and Electrochemistry Chemistry Lab I
CY-459	Physical and Electrochemistry Chemistry Lab II



## DEPARTMENT OF MATHEMATICS

### Dean

Prof. Dr. Muhammad Shahid Rafique

### Chairman

Prof. Dr. Muhammad Mushtaq

### Professor Emeritus

Dr. Nasir Chaudhary

### Professors

Dr. Asma Rashid Butt

Dr. Sabir Hussain

Dr. Qasim Ali Ch.

### Associate Professors

Dr. Muhammad Irfan Qadir

Dr. Shafique-ur-Rahman

Dr. Mustafa Habib

Dr. Samia Riaz

Dr. Saadia Farid

### Assistant Professors

Mr. Muhammad Naeem

Ms. Rubina Fayyaz

Ms. Saima Nazir

Dr. Anjum Pervaiz

Ms. Samina Saeed Khan

Dr. Shamaila Samreen

Dr. Kashif Ali Khan

Dr. Muhammad Shabbir

Dr. Taimoor Iqbal

### Lecturers

Mr. Abdur Rehman Khan Salari

Dr. Ali Ovais

### Introduction

The Department of Mathematics is one of the oldest departments of the University of Engineering and Technology, Lahore. It was established in 1961. The Department of Mathematics not only runs its own programs like BS in Mathematics, 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.

### Program Educational Objectives (PEOs)

**PEO-01:** Establish the base for lifelong education by creating essential concepts and equipping the student with necessary techniques, need to start a carrier of research, development, teaching or applications involving mathematics.

**PEO-02:** Enable them to use the equations of Mathematics describing general laws applying, mainly, inductive logic.

**PEO-03:** Modeling of Engineering Problems from the Fundamental Laws to create practical system.

**PEO-04:** Graduates will be capable to critically analyze mathematical problems, taking them from various stages of concept building with problem-solving skills.

### 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.

### B.Sc. Mathematics

Year 1

Semester 1				Semester 2			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
MATH-101	Calculus-I	3	0	MATH-104	Calculus II	3	0
MATH-102	Elements of Set Theory and Mathematical Logic	3	0	MATH-105	Statistics	3	0
CS-103	Introduction of Computer Programming for Data Science	2	1	MATH-106	Software Packages	3	0
HU-111	Communication Skills	1	0	CY-151 & 151L	Introduction to Physical Chemistry	2	1
IS-101	Islamic and Pakistan Studies-I	3	0	HU-221	Technical Writing and Presentation Skills	3	0
PHYS-101 & 101L	Mechanics	3	1	IS-201	Islamic and Pakistan Studies II	3	0
QT-101	Translation of the Holy Qur'an-I	1	0				
Semester 3				Semester 4			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
MATH-201	Calculus III	3	0	MATH-205	Ordinary Differential Equations	3	0
MATH-203	Scientific Programming	2	1	MATH-206	Discrete Mathematics	3	0
MATH-204	Linear Algebra	3	0	MATH-211	Operation Research-I	3	0
PHYS-201 & 201L	Waves and Oscillations	3	1	CY-111 & 111L	Introduction to Analytical Chemistry	2	1
MGT-100	Introduction to Business	3	0	PHYS-202	Heat and Thermodynamics	3	0
				HU-204	Any Foreign Language	1	0
				QT-201	Translation of the Holy Qur'an-II	1	0
Semester 5				Semester 6			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
MATH-301	Real Analysis-I	3	0	MATH-307	Classical Mechanics	3	0
MATH-302	Vector and Tensor Analysis	3	0	MATH-308	Partial Differential Equations	3	0
MATH-303	Probability	3	0	MATH-309	Complex Analysis	3	0
MATH-304	Topology	3	0	MATH-310	Differential Geometry	3	0
MATH-312	Operation Research II	3	0	MATH-311	Real Analysis-II	3	0
MATH-305	Modern Algebra-I	3	0	QT-301	Translation of the Holy Qur'an-III	1	0
Semester 7				Semester 8			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
MATH-400	Number Theory	3	0	MATH-405	Integral Equations	3	0
MATH-401	Numerical Analysis	3	0	MATH-441	Functional Analysis	3	0
MATH-403	Mathematical Physics	3	0		Elective - 3	3	0
	Elective -1	3	0		Elective - 4	3	0
	Elective -2	3	0	MATH-460	Project	3	0
				QT-401	Translation of the Holy Qur'an-IV	1	0

## \* Elective Subjects (Pure Mathematics)

MATH-442	Measure Theory
MATH-443	Algebraic Topology
MATH-444	Convex Analysis
MATH-445	Modern Algebra II (Rings and Modules)
MATH-446	Advanced Group Theory
MATH-447	Axiomatic Set Theory
MATH-448	Riemannian Geometry
MATH-449	Galois Theory

Fourth Year 7<sup>th</sup> Semester (Applied Mathematics)

Course Code	Course Title	Credit Hours
MATH-401	Numerical Analysis	3

MATH-402	Fluid Mechanics-I	3
MATH-403	Mathematical Physics	3
	Elective-1	3
	Elective-2	3
<b>Total:</b>		15

**Fourth Year 8<sup>th</sup> Semester (Applied Mathematics)**

Course Code	Course Title	Credit Hours
MATH-404	Fluid Mechanics-II	3
MATH-405	Integral Equations	3
	Elective-3	3
	Elective-4	3
MATH-460	Project	3
QT-401	Translation of the Holy Qur'an-IV	1
<b>Total:</b>		16

**\* Elective Subjects (Applied Mathematics)**

MATH-406	Electromagnetism	MATH-409	General Relativity
MATH-407	Analytical Dynamics	MATH-410	Special Relativity
MATH-408	Quantum Mechanics	MATH-411	Elastic Theory

**Fourth Year 7<sup>th</sup> Semester (Computational Mathematics)**

Course Code	Course Title	Credit Hours
MATH-401	Numerical Analysis	3
MATH-403	Mathematical Physics	3
MATH-416	Optimization Theory	3
	Elective-1	3
	Elective-2	3
<b>Total:</b>		15

**Fourth Year 8<sup>th</sup> Semester (Computational Mathematics)**

Course Code	Course Title	Credit Hours
MATH-405	Integral Equations	3
MATH-412	Numerical Solutions of Differential Equations	3
	Elective-3	3
	Elective-4	3
MATH-460	Project	3
QT-401	Translation of the Holy Qur'an-IV	1
<b>Total:</b>		16

**\* Elective Subjects (Computational Mathematics)**

MATH-417	Mathematical Modeling and Simulation
MATH-418	Dynamical Systems
MATH-419	Mathematical Biology
MATH-420	Computational Fluid Dynamics



## DEPARTMENT OF PHYSICS

### Dean

Prof. Dr. Muhammad Shahid Rafique

### Chairman

Prof. Dr. Anwar Latif

### Professors

Dr. Rehana Sharif  
Dr. Muhammad Iqbal  
Dr. Shamaila Shahzadi

### Associate Professors

Dr. Rashid Jalil  
Dr. Ibtisam Riaz  
Dr. Abdul Waheed Anwar

### Assistant Professors

Dr. Ishrat Mubeen Dildar  
Dr. Umber Kalsoom  
Dr. Usman Ilyas  
Dr. Muneeb Irshad  
Dr. Saba Majeed Gondal  
Dr. Amina Afzal  
Dr. Jaweria Zartaj Hashmi  
Dr. Saima Shaukat  
Dr. Haamid Jamil  
Dr. Sofia Siddique

### Laser & Optronics Centre

### Director

Prof. Dr. Muhammad Shahid Rafique

### Professor

Dr. Khurram Siraj

### Assistant Professor

Dr. Khadija tul Kubra

The Department was established in 1962

### Programs Offered

- a) Bachelor of Science (BS) Physics (4 Years Program)
- b) M.Phil. Applied Physics
- c) M.Phil. Nano Science and Technology
- d) Ph.D. Physics

The faculty is highly qualified and motivated including twenty (20) members with Ph.D. degrees. The interdisciplinary curriculum 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, Electronics, Computer Science and its applications, etc.

The Department has produced **497** 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, Jinah Hospital, Mayo Hospital, Children Hospital etc. The Department has also produced **30** Ph.D. and **32** are pursuing their Ph. D degrees. There are seven 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 B.S. Physics program was started in 2020. The students enrolled in Session 2020, Session 2021 and Session 2022 are pursuing their BS Physics degree.

The Department offers a challenging Bachelor of Science (B.S. Physics) 4 years program that prepares students in all core areas of physics and aspires to develop them into versatile critical thinkers. This program is designed to provide a strong foundation of the fundamental principles of Physics. Faculty is highly engaged in experimental and theoretical research. Highly equipped undergraduate laboratories (mechanics, electricity and magnetism, waves and oscillations, electronics, modern physics, laser and optics, advanced electronics) are available for students to understand the practical applications of theoretical concepts. There are several other opportunities for undergraduate students which provide them more conducive learning environment to have hands-on experience by actively engaging in curricular and extra curricular activities. This enables our students to have a fantastic career in their particular field.



### B.S. Physics Program (Course Scheme)



Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
PHYS-101	Mechanics	3	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
MATH-101	Calculus-I	3	0	MATH-104	Calculus-II	3	0
CS - 103	Introduction to computer programing for data science	2	1	PHYS-102	Electricity and magnetism	3	1
CY- 151	Introduction to physical chemistry	2	1	CY- 111	Introduction to analytical chemistry	2	1
				QT-101	Translation of the Holy Quran-I	1	0

Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
PHYS-201	Waves & oscillations	3	1	HU-111	Communication skills	1	0
PHYS-202	Heat & thermodynamics	3	0	PHYS-204	Electronics -I	3	1
MGT-100	Introduction to business	3	0	PHYS-205	Physical and geometrical optics	3	0
PHYS-203	Solid state physics I	3	0	MATH-205	Ordinary differential equations	3	0
MATH-204	Linear algebra	3	0	PHYS-206	Classical mechanics	3	0
HU-204	Foreign language (any)	1	0	MGT-102	Sociology	3	0
				QT-201	Translation of Holy Quran-II	1	0

Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
PHYS-311	Concepts of modern physics	3	1	PHYS-321	Mathematical methods of physics-II	3	0
PHYS-312	Mathematical methods of physics-I		0	PHYS-322	Nuclear physics-II	3	0
PHYS-313	Nuclear physics-I	3	0	PHYS-323	Electrodynamics-II	3	0
PHYS-314	Electrodynamics-I	3	0	PHYS-324	Quantum mechanics-II	3	0
PHYS-315	Quantum mechanics-I	3	0	PHYS-325	Electronics-II	3	0
QT-301	Translation of the Holy Quran-III	1	0	MGT-211	Principles of management	3	0

Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
PHYS-441	Statistical methods in physics	3	0	PHYS-446	Solid state physics-II	3	0
PHYS-442	Lasers physics	3	1	PHYS-447	Health and medical physics	3	0
PHYS-443	Thermal and statistical physics	3	0	PHYS-448	Plasma physics	3	0
PHYS-444	Computational physics	3	0	QT-401	Translation of the Holy Quran-IV	1	0
PHYS-445	Semiconductor optoelectronics	3	0				

**Elective Subjects**

PHYS-491	Advanced electronics (Elective-I)	3
PHYS-491L	Advanced electronics (Lab.) / Project (Elective-I)	3
OR		
PHYS-492	Atmospheric science and meteorology (Elective-II)	3
PHYS-492L	Atmospheric science and meteorology (Lab.) / Project (Elective-II)	3
OR		
PHYS-493	Physics at nanoscale (Elective-III)	3
PHYS-493L	Physics at nanoscale (Lab.) / Project (Elective-III)	3
OR		
PHYS-494	Quantum plasmas (Elective-IV)	3
PHYS-494L	Quantum plasmas (Lab.) / Project (Elective-IV)	3
OR		
PHYS-500	Thesis (Elective-V)	6

**Courses offered to Engineering-Non Engineering Disciplines.**

Course Code	Subject	Credit Hours		Disciplines
		Th	Pr	
PHY-123	Mechanics and Wave Motion	2	1	Electrical Engineering & Computer Engineering
PHY-132	Electricity and Magnetism	2	1	Electrical Engineering & Computer Engineering
PHY-111	Applied Physics	2	1	Computer Science
PHY-119	Engineering Physics	2	0	Mechanical Engineering
PHY-119	Engineering Physics	2	1	Automotive Engineering
PHY-118	Applied Physics	2	1	Mechatronics & Control Engineering
PHY-122	Basic Mechanics	2	1	Civil Engineering & Transportation Engineering
PHY-113	Applied Physics	2	1	Chemical Engineering
PHY-102	Physics for Architectural Engineering	2	1	Architectural Engineering
PHY-112	Applied Physics	2	1	Environmental Engineering
PHY-211	Environmental Physics	2	1	Environmental Science
PHY-116	Applied Physics	2	1	Mining Engineering
PHY-117	Applied Physics	2	1	Geological Engineering
PHY-114	Applied Physics	2	1	Metallurgical and Material Engineering
PHY-115	Applied Physics	2	1	Pet & Gas Engineering
PHY-301	Packaging Physics	2	1	Product and Industrial Design Engineering
PHY-102	Applied Physics	2	1	City and Regional Planning Engineering
PHYS-101	Mechanics	3	1	BS Mathematics & BS Chemistry
PHYS-201	Waves and Oscillations	3	1	BS Mathematics
PHYS-202	Heat & thermodynamics	3	0	BS Mathematics
PHY-001	Basic Physics	2	1	Zero Semester (For Foreign Students)

The Department has also **two fully** equipped Advanced Research Centres:

(i) **Laser & Optronics Centre**

This centre 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 other equipment related to above mentioned fields.

(ii) **Nanotechnologies Research Centre**

The Nanotechnologies Research Centre (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.

Nanotechnology Research Centre (NRC) has the following state-of-the-art laboratories

1. Nanofabrication Lab
2. Diagnostic & Characterization Lab

The labs are equipped with Atomic Force Microscope (AFM), Raman Spectrometer, AC Electrodeposition set up, DC Electrodeposition set up, Magnetic Field Annealing System, Multifunctional Generator and Magnetic Stirrer with hot plate etc.



## DEPARTMENT OF HUMANITIES, MANAGEMENT AND SOCIAL SCIENCES

### Dean

Prof. Dr. Muhammad Shahid Rafique

### Chairperson

Dr. Alia Naushahi

### Assistant Professors

Dr. Amna Niazi

Mehvish Riaz

Sadia Gondal

### Lecturer

Sadia Khan

Saida Usman Khan

Sadaf Qureshi

Sara Khan

Hina Samar

### Introduction

The general objective of the courses in the Department of Humanities and Management Sciences is to groom the 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 for Planners and other management subjects. Since the 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

### Associate Professors

Dr. Atiq ur Rahman

Dr. Hafiz Zahid Latif

### Assistant Professors

Dr. Muhammad Nadeem Shah

Ms. Gul Saria Ashraf

Dr. Tanveer Qasim

Dr. Hafiz Quadratullah

### Chairman

Prof. Dr. Hafiz Muhammad Shahbaz

The curricula in the University include compulsory and optional subjects. Islamic & Pakistan studies are included in the compulsory subjects. 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. 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 programmes. 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 teaching this subject also. The University welcomed the idea of the Governor of Punjab to teach Qur'anic translation to the students of bachelor's degree programs. So the subject "Translation of the Holy Qur'an", one credit hour course per year, is being taught to the undergraduate students since 2020. The Department has a computer lab and a library rich with high quality research books. In addition to all these activities, some faculty members of the Department have been delivering Friday Sermon in Jamia Mosque UET.



## INSTITUTE OF BUSINESS AND MANAGEMENT

### Dean

Prof. Dr. Muhammad Shahid Rafique

### Director

Dr. Muhammad Nasir Malik

### Assistant Professors

Dr. Amir Ikram  
Dr. Bilal Aziz  
Dr. Farah Samreen  
Dr. Farman Afzal

Dr. Hina Munir

Dr. Muhammad Shoab Farooq

Dr. Naeem Akhtar

Dr. Zeeshan Ali

### Lecturers

Ms. Aisha Altaf  
Mr. Aftab Shoukat  
Mr. Farid Pervez Shami  
Ms. Maria Khan  
Ms. Maryam Farooq (Study Leave)

Mr. Muhammad Zia-ul-Haq (Study Leave)

Ms. Quratulain Akhtar

Ms. Rabia Naseem

Ms. Rizwana Hameed

Mr. Saad Mahmood (Study Leave)

Ms. Sadaf Razzaq

Ms. Safia Kanwal

Ms. Samreen Malik

Ms. Sara Kanwal (Study Leave)

Ms. Zarmeena Malik

Ms. Zunaira Iftikhar

### Introduction

IB&M was established in 2009 to facilitate a community of responsible citizens and aspiring management professionals who can inspire the business landscape through their creativity, integrity, and commitment to excellence and sustainability. The Institute leverages UET's 100 years of academic excellence in innovation, professional expertise, and industry-oriented education. IB&M provides a combination of a robust curriculum, highly qualified faculty with remarkable research contributions, well-equipped business school premises, and a myriad of student support services that synergize into a memorable and rewarding learning experience.

### IB&M Vision

To have a transformative impact on society through education and research.

### IB&M Mission

To educate the next generation of responsible citizens in a collaborative environment that promotes transformational learning, inspires creativity & solution orientation, and to make a meaningful contribution to business and society through research.



### **Undergraduate Degree Programs**

For all undergraduate programs offered at IB&M, our philosophy is to impart contemporary knowledge with an equal emphasis on personality and professional development so that our graduates are nurtured to realize their full potential. Our graduates are well-placed in leading national and multinational organizations and provide a strong alumni network base for future graduates. The Institute offers the following undergraduate degree programs:

#### **Bachelor of Business Administration (BBA)**

BBA program prepares its participants for careers in business and non-profit organizations as management professionals by enhancing their intellectual capacity, personal and professional development, and personality transformation. The graduates will be able to synthesize knowledge of functional business areas for effective management in a dynamic business environment.

#### **Bachelor of Business and Information Technology (BBIT)**

BBIT program prepares technology-conversant professionals with business and information technology knowledge funneled into a coherent strategic whole for effective management in a disruptive business landscape. It offers a unique blend of business management and information technology tools to be implemented in the IT leveraged management of conventional businesses.

### **Facilities**

- IB&M has always relied on technology-intensive methods for teaching and learning. At IB&M, a state-of-the-art computer laboratory provides a vibrant and high-tech environment that caters to the learning needs of our students.
- The library at IB&M offers a wide array of advanced educational services. It is equipped with over 6,000 books related to curricula, general knowledge, and periodic journals to promote scholarly interests and research activities.
- IB&M organizes demand-driven professional activities, such as training programs, international conferences, seminars, workshops, business idea competitions, industrial tours, and recreational trips. The blend of curricular and extra-curricular activities enables the students to perform extraordinarily in their professional and personal lives.
- Business Incubation Center is designed to help young startups innovate, grow and create an impact on the societal level by solving some problems. We support these promising ventures to commercialize, gain traction and connect them with industry and investors. Our startups achieve success as we provide continuous guidance, mentoring, and monitoring for sustained growth.



## Bachelor of Business Administration (BBA)

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
HU 102	Functional English	3	0	HU 211	Business Communication	3	0
BIT 101	Digital Toolbox for Business	3	0	BUS 102	Macroeconomics	3	0
BUS101	Microeconomics	3	0	BUS 112	Financial Accounting	3	0
BUS 111	Principles of Accounting	3	0	BUS 131	Principles of Management	3	0
BUS 162	Business and Society	3	0	IS 101	Islamic and Pakistan Studies-I	3	0
BUS 161	Academic and Professional Development-I	1	0	QT 101	Translation of Holy Quran-I	1	0

Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
HU 221	Technical Writing & Presentation Skills	3	0	MA 257	Business Statistics	3	0
MA 151	Business Mathematics	3	0	BUS 212	Cost Accounting	3	0
BUS 262	World Today	3	0	BUS 232	Organizational Behavior	3	0
BUS 231	Human Resource Management	3	0	BUS 241	Principles of Marketing	3	0
IS 201	Islamic and Pakistan Studies-II	3	0	BUS 263	Law and Society	3	0
BUS 261	Academic and Professional Development-II	1	0	QT 201	Translation of Holy Quran-II	1	0

Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
BUS 321	Business Finance	3	0	BIT 301	Management Information Systems	3	0
BUS 342	Marketing Management	3	0	BUS 322	Financial Management	3	0
BUS 351	Production and Operations Management	3	0	BUS 343	Digital Marketing	3	0
BUS 362	Research Methods for Social Sciences	3	0	BUS 352	Supply Chain Management	3	0
	Free Elective-I				Free Elective-II		
BUS 361	Academic and Professional Development-III	1	0	QT 301	Translation of Holy Quran-III	1	0

Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
BUS 411	Taxation Management	3	0	HU 400	International Language	3	0
BUS 471	Entrepreneurship	3	0	BUS 431	Strategic Management	3	0
	Minor-I	3	0		Minor-III	3	0
	Minor-II	3	0		Minor-IV	3	0
BUS 498	Final Year Project-I	3	0	BUS 499	Final Year Project-II	3	0
BUS 461	Academic and Professional Development-IV	1	0	QT 401	Translation of Holy Quran-IV	1	0

- Free Electives courses can range from 2 to 5 credit hours each.

## Bachelor of Business and Information Technology (BBIT)

Year 1							
Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
HU 102	Functional English	3	0	HU 211	Business Communication	3	0
MA 151	Business Mathematics	3	0	MA 257	Business Statistics	3	0
BIT 101	Digital Toolbox for Business	3	0	CS 103	Introduction of Computer Programming for Data Science	2	1
BUS 101	Microeconomics	3	0	BUS 102	Macroeconomics	3	0
BUS 162	Business and Society	3	0	BUS 131	Principles of Management	3	0
BUS 161	Academic and Professional Development-I	1	0	IS 101	Islamic and Pakistan Studies-I	3	0
QT 101	Translation of Holy Quran-I	1	0				

Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
HU 221	Technical Writing & Presentation Skills	3	0	BIT 272	Database Systems	2	1
BIT 271	Object Oriented Programming	2	1	BIT 277	Data Structures and Algorithms	3	0
BIT 275	Data Communication and Computer Networking	3	0	BUS 262	World Today	3	0
BUS 111	Principles of Accounting	3	0	BUS 211	Managerial Accounting	3	0
BUS 231	Human Resource Management	3	0	BUS 232	Organizational Behavior	3	0
BUS 261	Academic and Professional Development-II	1	0	IS 201	Islamic and Pakistan Studies-II	3	0
QT 201	Translation of Holy Quran-II	1	0				

Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
BUS 362	Research Methods for Social Sciences	3	0	BIT 302	Enterprise Systems	3	0
BIT 366	Web Development	3	0	BIT 303	E-Commerce	3	0
BIT 361	Software Engineering	3	0	BUS 322	Financial Management	3	0
BUS 321	Business Finance	3	0	BUS 342	Marketing Management	3	0
BUS 241	Principles of Marketing	3	0	BUS 352	Supply Chain Management	3	0
BUS 361	Academic & Professional Development-III	1	0	BUS 263	Law and Society	3	0
QT 301	Translation of Holy Quran-III	1	0				

Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Prt			Th	Prt
	IT Elective-I	3	0	BUS 431	Strategic Management	3	0
	IT Elective-II	3	0	HU 400	International Language	3	0
BUS 471	Entrepreneurship	3	0		IT Elective-III	3	0
	Free Elective-I				Free Elective-II		
BUS 461	Academic & Professional Development-IV	1	0	BIT 499	Final Year Project-II	3	0
QT 401	Translation of Holy Quran-IV	1	0				
BIT 498	Final Year Project-I	3	0				

**List of Elective Minor Courses for BBA****Human Resource Management Minor**

1. HRM 401 Recruitment and Selection
2. HRM 402 Training and Development
3. HRM 403 Performance Management
4. HRM 404 Cross Cultural Management

**Marketing Minor**

1. MKT 401 Retail Management
2. MKT 402 Services Marketing
3. MKT 403 Consumer Behavior and Marketing
4. MKT 404 Selling and Sales Management
5. MKT 405 Integrated Marketing Communication

**Finance Minor**

1. FIN 401 Financial Analysis and Reporting
2. FIN 402 Financial Markets and Institutions
3. FIN 403 Commercial and Islamic Banking
4. FIN 404 International Finance
5. FIN 405 Credit Management
6. FIN 406 Insurance and Risk Management
7. FIN 407 Investment Analysis

**List of Free Electives for BBA**

- CS 103 Introduction of Computer Programming for Data Science (2,1)  
 Math-211 Operations Research-I (3,0)  
 Math-312 Operation Research-II (3,0)

- Math-416 Optimization Theory (3,0)  
 MA-346 Numerical Methods (3,0)  
 CHE 410 Engineering Management (2,0)  
 CHE 104 Health and Safety at Workplace (2,0)  
 PPE 107 Engineering Materials (3,0)  
 PPE 209 Chemical & Petrochemical Industries (3,0)  
 BUS 311 Audit and Assurance (3,0)  
 BUS 363 Project Management (3,0)  
 BUS 364 Local Markets (3,0)  
 BIT 487 Data Science (3,0)  
 BIT 489 Business Intelligence (3,0)  
 BIT 411 Search Engine Optimization (3,0)  
 BIT 486 E-procurement (3,0)  
 BIT 414 Information System Audit and Control (3,0)  
 Any other course with the approval of Program Head and Director

**List of IT Electives for BBIT**

- BIT 487 Data Science (3,0)  
 BIT 489 Business Intelligence (3,0)  
 BIT 373 Software Quality Assurance (3,0)  
 BIT 478 Artificial Intelligence (3,0)  
 BIT 411 Search Engine Optimization (3,0)  
 BIT 486 E-procurement (3,0)  
 BIT 412 Database Administration and Management (3,0)  
 BIT 413 System and Network Administration (3,0)

- BIT 480 Internetworking with Unix TCP/IP (3,0)  
 BIT 414 Information System Audit and Control (3,0)  
 BIT 415 Cyber Security (3,0)  
 BIT 416 Mobile Application Development (3,0)  
 BIT 417 Digital Marketing and Web Analytics (3,0)

**List of Free Electives for BBIT**

- Math-211 Operations Research-I (3,0)  
 Math-312 Operation Research-II (3,0)  
 Math-416 Optimization Theory (3,0)  
 MA-346 Numerical Methods (3,0)  
 CHE 410 Engineering Management (2,0)  
 CHE 104 Health and Safety at Workplace (2,0)  
 PPE 107 Engineering Materials (3,0)  
 PPE 209 Chemical & Petrochemical Industries (3,0)  
 BUS 311 Audit and Assurance (3,0)  
 BUS 363 Project Management (3,0)  
 BUS 364 Local Markets (3,0)  
 BUS 411 Taxation Management (3,0)  
 Any course from the list of Elective Minor for BBA  
 Any other course with the approval of Program Head and Director

**List of Pre-Requisite Courses**

Course(s)	Pre-Requisites
Research Methods for Social Sciences	Business Statistics
Financial Accounting, Cost Accounting, Managerial Accounting	Principles of Accounting
Business Finance, Financial Management	Financial Accounting
Marketing Management	Principles of Marketing
Human Resource Management, Organizational Behavior, Production & Operations Management, Supply Chain Management	Principles of Management
Finance Minors	Financial Management
Marketing Minors	Marketing Management
Human Resource Management Minors	Human Resource Management, Organizational Behavior
Object Oriented Programming	Introduction of Computer Programming for Data Science
Data Structures and Algorithms, Web Development	Object Oriented Programming

# NEW CAMPUS

## (KSK)

- Department of Electrical, Electronics & Telecommunication Engineering
- Department of Energy Engineering
- Department of Bio-Medical Engineering
- Department of Mechanical, Mechatronics & Manufacturing Engineering
- Department of Chemical, Polymer & Composite Material Engineering
- Department of Food Engineering and Bio-Technology
- Department of Basic Sciences and Humanities
- Department of Management
- Department of Computer Sciences

## Department of Electrical, Electronics & Telecommunication Engineering

**Chairman**

Dr. Muhammad Ali

Dr. Bilal Wajid

Dr. Umar Rashid

Dr. Farrukh Arsalan

Dr. Haris Anwaar

Mr. Rafay Chughtai

Mr. Bilal Anwar

Mr. Usman Hasan

Ms. Ibrah Liaqat

Mr. Farhan Ahmed Butt

Mr. Rizwan Khan

Mr. Atif Naveed

Mr. Muhammad Umair

Mr. Syed Muhammad Furqan

Mr. Ammar Naseer

Ms. Iqra Farhat

**Associate Professor**

Dr. Faheem Gohar Awan

Dr. Hifsa Shahid

Dr. Ali Raza

**Lecturer**

Mr. Fahad Ijaz

Mr. Salim Butt

**Assistant Professor**

Dr.-Ing. Farooq Mukhtar

The Department was inaugurated in 2007 as a mean to further enhance engineering developments in the region. Equipped with the most prestigious and ambitious labs, an incredibly well equipped library, state-of-the-art equipment and the latest research material to enable the students to form a firm grip on the leading technological and scientific innovations. The Department stands at the pinnacle of technological innovation and creativity designed to drive the world further in this field. The Department is involved in developing cleaner, safer, more sustainable energy sources which will help bring a quantum leap to the world. It also has a department library, a faculty room, a semester cell, industrial liaison office, a conference room, girl's common room, IEEE & IET student sections. The Department is working in close collaboration with industries and Chamber of Commerce.

**Mission**

To generate electrical engineering professionals with knowledge, skills, ethics and innovation to contribute in socio-economic & environmental betterment of society.

**Program Educational Objectives (PEOs)**

B.Sc. electrical engineering programs in the Department is designed to provide its graduates a solid educational foundation on which they can build successful and sustainable careers in electrical engineering, electrical technology or a related field. The objectives are:

**PEO-01:** Graduates will exhibit their proficiency of applying the knowledge (mathematics, science and engineering) and skills (modern tools) to solve complex engineering problems related to electrical engineering

**PEO-02:** Graduates will exhibit effective communication, teamwork, leadership as complements to technical competence.

**PEO-03:** Graduates will incorporate economic, environmental and sustainability considerations into the practice of electrical engineering and are contributors to society through their problem-solving capabilities.

**PEO-04:** Graduates will demonstrate professionalism and uphold ethical values with integrity and commitment to continue their life-long technical and professional development

**Laboratories**

- Circuit Analysis
- Digital Logic Design
- Electric Machines
- Semiconductor
- Power System Simulation
- Control Systems and Automation
- Microprocessors and Computer
- Advanced Project
- Microwave and Antenna
- Project

**Specializations Offered**

Electrical Engineering with Specialization in Power System.

Electrical Engineering with Specialization in Computer and Embedded System.

Electrical Engineering with Specialization in Electronics and Telecommunication

## Department of Energy Engineering

### Associate Professor

Dr. Hasan Erteza Gelani  
(Teacher Incharge)

### Assistant Professor

Dr. Harris Mehmood Khan

Dr. Hira Tahir

Mr. Umair Furqan

Ms. Isra Nazir

### Lecturers

Ms. Anam Anwar

From a global perspective, the United Nations (UN) adopted 17 Sustainable Development Goals (SDGs), also termed as Global Goals as a universal call to action, in order to put an end to poverty and promote sustainability. Among these goals, the goal number 07 (Affordable and Clean Energy) addresses the access to affordable, modern, reliable and sustainable energy. From national perspective; fortunately and unfortunately, Pakistan has been blessed with almost all kinds of renewable energy resources, still more than 01 billion people are deprived of electricity and the country is struggling to achieve the targets set by UN till 2030. Harvesting energy for utilization at various levels (domestic, industrial etc) requires technical knowledge and skill. The Higher Education Commission (HEC) of Pakistan sensed the need of time and launched the program in 2014-15. The revised curriculum of which was presented in 2018. The program was named as Energy Systems Engineering (ESE), which was aimed to provide knowledge related to energy and power, mechanical and chemical technologies mixed with energy economics and policy.

### Mission:

To dispense leading-edge knowledge and skill amalgamated with modern tools which serve as a pathway for the community/country towards energy sustainability.

### Program Educational Objectives (PEOs)

**PEO-01:** To apply knowledge of engineering in devising solution for energy related problems remaining within environmental constraints.

**PEO-02:** To develop skills for design, formulation and analyses of efficient systems for extraction and processing of clean energy.

**PEO-03:** To cultivate effective communication skills as well as knowledge of social implications of energy engineering.

### Career Opportunities:

The curriculum of ESE has been designed to adjust the energy system engineers in field as well as office based jobs. From the perspective of field jobs, energy system engineers find career opportunities in various energy based firms, particularly those dealing with extraction of energy from various sources inside or outside Pakistan. Whereas, from the perspective of office based jobs, the energy system engineers can find career opportunities in energy management and policy. The program attracts male as well as female candidates due to wide scope of jobs.

In line with the case of Pakistan and UET, China Pakistan Economic Corridor, CPEC is a pilot project of Belt and Road initiative of China which has been touted by many as a gateway to economic prosperity and stability in Pakistan. It accompanies great potential in terms of solving the ongoing energy crisis and eventually leading Pakistan towards energy security. CERAD functions to provide energy solutions to the government and the graduates from UET in ESE can serve the government of Pakistan on CPEC.

### Programs Offered:

B.Sc. Energy Systems Engineering

B.Sc. Energy Systems and Management

## Department of Bio-Medical Engineering

### Chairman

Dr. Nida Iqbal

### Assistant Professors

Dr. Saima Anwar

Adnan Rauf

### Lecturers

Mr. Namra Afzal

Ms. Affifa Barakullah

Mr. Muhammad Usman

Mr. Muhammad Aamir

Mr. Muhammad Abdullah

Mr. Farhan Yousaf



Biomedical Engineering is the application of engineering principles and concepts in health sciences. Everything from corrective glasses to manipulation of genes lies within the scope of Biomedical Engineering. The Department is well-equipped with state-of-the-art laboratories and purpose-built class rooms. The curriculum is meticulously designed to not only provide students with extensive theoretical knowledge but also along with adequate hands-on experience. The Department is currently offering one study program.

**Programs Offered**

B.Sc. Biomedical Engineering

**Mission**

To become the leading program of Biomedical Engineering by imparting methodical educational training to our students and preparing them to become innovative and socially responsible engineers in health care research and industry.

**Program Educational Objectives (PEOs)**

**PEO-01:** Our graduates will solve problems related to Biomedical Engineering

**PEO-02:** Our graduates will work effectively as a team member and lead multidisciplinary teams while demonstrating the interpersonal and managerial skills, and ethical responsibilities

**PEO-03:** Our graduates will pursue higher education, research and professional advancement to develop sustainable solutions fulfilling societal needs

**Laboratories**

Latest equipment has been inducted in the following labs and students are encouraged to utilize these lab facilities:

- Biomedical Instrumentation
- Biomaterials
- Bioengineering
- Human Anatomy & Physiology
- Simulation/Signal Processing
- Biomechanics
- Bioelectronics

**B.Sc. Biomedical Engineering**

Year 1							
Semester 1				Semester 1			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
PHY-111	Applied Physics	2	1	BME-103	Human Anatomy	2	1
CS-141	Introduction to Computing	3	1	MA-113	Calculus & Analytical Geometry	3	0
EE-199	Basic Electrical & Electronics Engineering	3	1	BME-102	Physiology 1	2	1
BME-104/MA-110	Basic Biology /Basic Mathematics	2,3	1,0	EE-110	Circuit Analysis	3	1
	International Language	0	0	CS-142	Programming Fundamentals	3	1
BME-101	Introduction of Biomedical Engineering	1	0	QT-101	Quran Translation	1	0
IS-101	Islamic & Pak Studies 1	3	0				
Year 2							
Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
MA-116	Linear Algebra & Differential Equations	3	0	BME-213	Biomedical Electronics	2	1
BME-201	Physiology 2	2	1	CSE-221	Digital Logic Design	3	1
BME-214	Biochemistry	3	0	MA-221	Complex Variable & Transform	3	0
EE-212	Semiconductor Devices	3	1	BME-202	Cellular & Molecular Biology	2	1
ME-100L	Workshop Practice	0	1	EE-220	Signals & Systems	3	0
HU-111L	Communication Skills	0	1	QT-201	Quran Translation 2	1	0
IS-201	Islamic & Pak Studies 2	3	0				
Year 3							
Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
BME-318	Biomedical Instrumentation 2	2	1	BME-310	Biomedical Instrumentation 1	2	1
BME-XXX	Technical Elective 1	3	0	EE-320	Applied Probability & Statistics	3	0
EE-340	Control Systems	3	1	MA-346	Numerical Methods	3	0
BME-244	Biomedical Modeling & Simulation	2	1	EE-273	Microprocessor Systems	3	1
BME-212	Biomechanics	2	1	BME-313	Biomaterials	2	1
QT-301	Quran Translation 3	1	0	ME-124L	Engineering Drawing	0	1
Year 4							
Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
MGT-XXX	Management Elective 1	3	0	BME-XXX	Technical Elective 4	3	0
BME-411	Medical Imaging	2	1	IME-251	Social & Ethical Aspects in Engineering	2	0
BME-XXX	Technical Elective 2	3	0	BME-XXX	Technical Elective 5	3	0
BME-XXX	Technical Elective 3	3	0	MGT-XXX	Management Elective 2	3	0
HU-221	Technical Writing & Presentation Skills	3	0	BME-412b	Biomedical Engineering Project Phase 2	0	3
BME-412a	Biomedical Engineering Project Phase 1	0	3	QT-401	Quran Translation 4	1	0

(5 out of given 23 must be chosen)

Technical Electives			
Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
BME-314	Bioelectricity	3	0
EE-392	Power Electronics	2	1
BME-433	Rehabilitation and Sports Medicine	2	1
BME-414	Biomedical Robotics	2	1
BME-415	Biofluid Mechanics	2	1
BME-416	Bioinformatics	3	0
CS-361	Artificial Intelligence	3	1
BME-418	Hospital Information Management Systems	3	0
BME-419	Medical Device Quality Systems and Standards	3	0
BME-420	Medical Image Processing	2	1
BME-423	Telemedicine Systems	2	1
BME-421	Biophysics	2	1
BME-425	DNA Computing	3	0
BME-316	Drug Delivery Systems	3	0
BME-444	Genetic Engineering	3	0
BME-432	Neuroscience & Neural Networks	3	0
BME-426	Regenerative Medicine	3	0
BME-427	Tissue Engineering	3	0
BME-317	Computational Fluid Dynamics	3	0
BME-428	Nano-Biotechnology	3	0
BME-429	Medical Device Regulatory Affairs	3	0
EE-439	Introduction to Machine Learning	3	0
BME-311	Biomedical Signal Processing	2	1

(2 out of given 6 must be chosen)

Management Electives			
Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr
MGT 211	Principles of Management	3	0
MGT 310	Production and Operations Management	3	0
MGT 313	Total Quality Management	3	0
MGT 410	Project Management	3	0
MGT 414	Entrepreneurship and Business Management	3	0
MGT 460	Engineering Economics	3	0

## Department of Mechanical, Mechatronics and Manufacturing Engineering

### Chairman

Prof. Dr. Shahid Imran

### Professors

Dr. Fahad Noor

Dr. Zahid Anwar

### Associate Professors

Dr. Muhammad Farooq

Dr. Muhammad Amjad

Dr. Muhammad Farhan

### Assistant Professors

Dr. Rabia Shaukat

Dr. Saad Nawaz

Dr. Adnan Qamar

Dr. Muhammad Mujtaba Abbas

Hafiz Muhammad Shahid Akbar

Mr. Muhammad Moeen Sultan

### Lecturers

Ms. Samina Ishaq

Mr. Sheeraz Ali

Mr. Adeel Munir

Ms. Tamseela Habib

Mr. Syed Mohammad Sannan

### Introduction

Mechanical Engineering is one of the oldest and broadest engineering disciplines. The Department was established in 2007. The Department has procured latest laboratory equipment in order to conduct laboratory work of engineering classes. The Department is growing and the leadership is committed to make it an excellent engineering education department. The Department has very active International Student Societies Chapters of American Society of Mechanical

Engineers (ASME) and American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). The Department hosted the international students' professional development conference (SPDC) in 2014. Students from national as well as international universities participated in the conference. A group of students represented the Asia Pacific section of the ASME in Houston, USA in November 2015. The department hosted "International conference on Mechanical Engineering (ICME-2020)" in 2020 and "International Conference on Energy Water and Environment (ICEWE-2021)" in 2021. The Department has fully functional research laboratory, department library, Semester Cell, Quality Enhancement Cell (QEC), Industrial Liaison Office, a Conference Room, Girls' Common Room and a Prayer Hall. The faculty members and students of the department frequently participate in National and International events. All the details and events related to the department are regularly updated on departmental official website: <https://medksk.uet.edu.pk/>

### Mission

To produce mechanical engineers equipped with knowledge and skills to carry on lifelong learning through quality teaching and training. Our graduates shall be able to serve for the sustainable development of the society while demonstrating professional ethics and responsible social conduct.

### Programs Offered

- B.Sc. Mechanical Engineering
- M.Sc. Thermo-Fluid Engineering
- PhD Mechanical Engineering (NOC Applied)

### Program Educational Objectives (PEOs)

The Mechanical Engineering Graduates will be able to:

**PEO 1:** Apply the knowledge to solve analytical and practical mechanical engineering problems.

**PEO 2:** Work for continuous professional and sustainable socio-technical development.

**PEO 3:** Demonstrate professional ethics, effective communication, and managerial skills.

### Laboratories

- Thermodynamics
- Fluid Mechanics
- Hydraulic Machinery
- CAD
- Mechanical Workshops
- CNC
- Refrigeration and Air Conditioning
- Heat and Mass Transfer
- Mechanics of Machines
- Mechanics of Material
- Dynamics
- Internal Combustion Engines

## Department of Chemical, Polymer and Composite Material Engineering

### Chairman

Prof. Dr. Tanveer Iqbal

### Professor

Prof. Dr. Sayyed Mohsin Ali Kazmi

### Associate Professor

Dr. Hamayoun Mahmood  
 Dr. Muhammad Imran Rashid  
 Dr. Asif Nadeem Tabish  
 Dr. Ch. Haider Ali  
 Dr. -Ing. Izzat Iqbal Cheema

### Assistant Professor

Dr. Samreen Hameed  
 Dr. Muhammad Asif Jamil  
 Dr. Zohaib Atiq Khan  
 Dr. Muhammad Irfan  
 Dr. Muhammad Waqas Iqbal  
 Dr. Muhammad Sulaiman  
 Mr. Muhammad Raashid

### Lecturer

Mr. Ahmed Hassam Khan  
 Mr. Fahad Ali Rabbani  
 Mr. Ansar Javid  
 Mr. Qazi Muhammad Omer  
 Mr. Muhammad Zia-ul-Haq  
 Ms. Azqa Khalid  
 Ms. Nazia Baig

### Introduction

The department of Chemical, Polymer, and Composite Materials Engineering was established in 2007. The department was primarily designed to build on current activities and to provide a nucleus for the University's rapidly expanding industrially oriented research training and consultancy in Chemical Engineering. Since then, more than 500 students have been graduated who are currently working in the reputed international and national organizations and institutes. The department has developed considerably in terms of undergraduate lab and postgraduate research facilities, interacted with the local industry with a specific focus on the local needs and indigenous solutions to their problems. Students are trained to use specialist scientific knowledge, analytical skills, 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.

### Mission

The mission statement the department encompasses three 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)

**PEO-01:** Apply the knowledge, principles, and skills in process industry, academia, and complementary fields to meet the stakeholder requirements.

**PEO-02:** Graduates achieve professional success by practicing ethical behavior, social responsibility, and diversity, both as individuals and in team environments with effective communication.

**PEO-03:** Graduates pursue innovative approaches and career growth through professional practice, graduate studies, and other training programs in engineering sciences and management.

### Programs Offered

- B.Sc. Chemical Engineering
- MS Safety, Health and Environment

### Laboratories

- Mass Transfer
- Fluid Mechanics
- 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 Food Engineering and BioTechnology

### Dean

Prof. Dr. Naveed Ramzan

### Assistant Professor

Dr. Asma Khan

Dr. Adeel Anwar

Dr. Momna Rubab

### Lecturer

Ms. Zoufishan Latif

Ms. Raheela Ijaz

### Chairman

Dr. Sikandar Rafiq

## Introduction

Department of Food Engineering and Biotechnology at new campus is a recent initiative of the university established in a state of the art purpose-built building. That is envisioned to aspire learning, innovation, research and values of potential food technologists. It currently offers BSc and intends to offer MS/M. Phil., and Ph. D. programs in near future. B.Sc. is a four-year undergraduate program that provides a strong foundation in all food technology areas. The program encompasses courses related to food chemistry, human nutrition, sustainable agriculture, fluid mechanics, plant pathology, food processing, food preservation, food analysis, occupational safety, health and environment, entomology, food biotechnology, sustainable food production, post-harvest technologies, food product development and quality management. This provides our graduates with a unique opportunity to develop networks and gain an understanding of technical areas inline with their career aspirations and entrepreneurial ventures. The program also focuses on holistic personality transformation of the students through general education, extra curricular activities and participative learning activities.

## Programs Offered

B.Sc. Food Science and Technology

## Mission

The aim of launching this program is to provide an educational environment where quality education can be imparted to the youth and to produce graduates capable to solve problems related to food industry and environment, to provide opportunity to focus on education and research, create direct linkages with industry at national and international level for technological and socio-economic development.

## Program Educational Objectives (PEOs)

**PEO-01:**Apply food science and biotechnology knowledge to identify and address the technical and societal problems.

**PEO-02:**Enhance students' intellectual and analytical abilities in taking initiative and/or developing innovative ideas for technological and professional growth in the field of food science and biotechnology.

**PEO-03:**Work effectively as a team member or lead multidisciplinary teams while demonstrating the interpersonal and management skills and ethical responsibilities.

## B.Sc. Food Science and Technology

Year 1							
Semester 1				Semester 1			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
FST-101	Introduction to Food Science and Technology	3	0	FST-103	Principles of Human Nutrition	3	0
CY-221	Inorganic and Organic Chemistry	2	1	FST-104	Food Chemistry	2	1
MA-110/ FST-102	Basic Mathematics/ Basic Biology	3	0	CMPE-112	Fundamentals of Programming and Data Science	3	1
HU-111	Communication Skills	0	1	CS-165	Applied Mathematics and Statistics	3	0
IS-101 or HU- 101	Islamic and Pakistan Studies – I (Muslim students)/ Ethics and Pakistan Studies – I (non-Muslim-students)	3	0	PHY-113	Applied Physics	2	1
ES-105	Psychology & Ethics	2	0	QT-101	Translation of the Holy Quran	1	0
Year 2							
Semester 3				Semester 4			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
FST-201	Occupational Safety, Health & Environment	2	0	FST-206	Entomology	2	1
FST-202	Sustainable Agriculture	2	1	FST-207	Plant Pathology	2	0
FST-203	Horticulture	2	1	FST-208	Food Processing & Preservation	2	1
FST-204	Food Microbiology	2	1	FST-209	Food Biochemistry and Biotechnology	2	1
FST-205	Fluid Mechanics	2	1	FST-210	Unit Operations in Food Processing	2	1
IS-201 or HU-201	Islamic and Pakistan Studies – II (Muslim students) or Ethics and Pakistan Studies – II (non-Muslim students)	3	0	HU-221L	Technical Writing and Presentation Skills	0	1
				QT-201	Translation of Holy Quran II	1	0



Year 3							
Semester 5				Semester 6			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
MGT-413	Project Management and Entrepreneurship	2	1	FST-307	Food Analysis	2	1
FST-301	Food Plant Layout	2	0	FST-308	Food Toxicology and Safety	2	0
FST-302	Food Technologies I	3	1	FST-309	Community Nutrition and Dietetics	2	0
FST-303	Food Processing-I	2	1	FST-310	Post-harvest Technologies	2	0
FST-304	Sustainable Food Production	2	0	FST-311	Food Technologies- II	3	1
FST-305	Fruit and Vegetable Processing	2	0	FST-312	Food Processing – II	2	0
FST-306	Food Biotechnology	2	1	FST-313	Community/ Research Project	1	0
				QT-301	Translation of Holy Quran III	1	0
Year 4							
Semester 7				Semester 8			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
FST-401	Food Technologies III	3	1	FST-407	Sensory Evaluation of Foods	2	1
FST-402	Food Product Development	3	0	FST-408	Food Laws and Regulations	2	0
FST-403	Food Extrusion Technology	2	0	FST-409	Marine Food Processing Technology	2	1
FST-404	Food Preservation and Packaging	2	0	FST-410	Milk and Meat Hygiene and Public Health	2	1
FST-405	Research Projects and Scientific Writing	1	1	FST-411	Food Quality Management	2	0
FST-406	Final Year Project-I	0	3	FST-412	Final Year Project-II	0	3
				QT-401	Translation of Holy Quran IV	1	0

## Department of Basic Sciences and Humanities

### Chairman

Prof. Dr.Kashif Rehan

### Professor

Dr. Kashif Rehan

### Associate Professor

Dr. Ahmed Shuaib

Dr. Samina Akbar

Dr. Masood UI Hassan Farooq

### Assistant Professor

Dr. Rashid Munir

Dr. Maryam Imtiaz

Dr. Ayesha Riasat

Dr. Umm-I-Kalsoom

Dr. ZulfiqarAli

Dr. ImranSajid

Dr. Anam Sajid

### Lecturer

Mrs. Saba Ajmal

Mr. Muhammad Usman

Mr. Habib-ur-Rehman

Mr. Hassan Imtiaz

### Introduction

In consonance with the vision of HEC and PEC, the doyens of the university agreed on allocating 30% of curriculum to these epistemological domains which, in turn, gave rise to the Department of Basic Natural Sciences and Humanities. With an aim to forge sound roots in modes of rational inquiry and to introduce students with scientific, socio-cultural, aesthetic and oratory convictions the Department offers comprehensive array of subjects.

### Programs Offered

The Department of Natural Sciences and Humanities has been offering the wide variety of programs to form a bridge between the realms of engineering and basic sciences & humanities. These programs are given below.

- PhD Chemistry
- PhD Physics
- PhD Mathematics
- MPhil Chemistry
- B.Sc. Environmental Science
- B.Sc. Mathematics
- B.Sc. Physics
- B.Sc. Chemistry

## Laboratories

The Department possesses and takes care of five undergraduate state-of-the-art laboratories including Applied Chemistry, Applied Physics, Engineering Physics, Mechanics and Computer Labs. These laboratories are equipped with cutting edge equipment to enrich the learning experience of young minds along with the flavor of practical work. These laboratories also render invaluable technical support to the projects undertaken by other departments.

### Advanced Research Lab

An Advanced Research Laboratory was established in the Department of Basic Sciences and Humanities at UET NEW Campus in 2017 to initiate the multifaceted research activities and projects in the campus. This laboratory brings together scientists and engineers not only from different departments of UET but also from other institutes of Pakistan to collaborate on research and development. The major instruments which are available in this advanced research lab include UV-spectrophotometer, FTIR, HPLC, GC-MS and Atomic Absorption. This advanced research lab has been serving research scholars not only of NEW campus but also the research scholars of other UET campuses. We are expecting successful applications of this research lab to develop a globally competitive research program with a wide vision to address and help in solving national and international problems in addition to addressing fundamental questions in science & technology.

### Electrochemistry lab

The Electrochemical Laboratory, directed by Dr Samina Akbar, is equipped with a number of unique, sophisticated, custom-made apparatuses for electrochemical deposition, characterization, and conventional electrochemical measurements. The unique electrochemical methodologies combined with the advanced research facilities allowed lab scientists to lead research in fastest growing energy sector and hot technological areas, attracting collaborators from the universities and private industries. The electrochemistry lab fosters interdisciplinary research on fuel cell technologies, corrosion, electrochemical kinetics, transport processes, chemical thermodynamics, and other fundamental areas of electrochemistry. The lab also offer paid research program for undergraduate and postgraduate students. The lab hosts all necessary capabilities for template assisted electrochemical fabrication of metals/metal oxide/composite nanomaterials, complete electrochemical characterization, and performance tests for both fuel cells and batteries.

### Physics Research Lab (PRL)

Basic facilities for the fabrication of nanoparticles and deposition of thin films are available in PRL. Apparatus is available for the synthesis of nanoparticles through hydrothermal and co-precipitate method (DC Sputtering). Deposition of thin film by spin coater and magnetron sputtering is going to be installed soon in the lab. Recently PRL has won the NRPU funding to the tune of 7.2 million rupees for the development of new photoactive materials for degradation of pollutants. Lab is open for students of M.Phil. and Ph.D. from main campus to make use of the available facilities to promote and advance in the field of research.

- Advance Nano-material Research
- Applied Chemistry
- Bio-material / Nano ceramics
- Nano-material / Electro-Catalysis
- Environmental Science
- Applied Physics
- Engineering Physics
- Physics Research (Nanoparticles Synthesis)
- Physics Research
- Applied Mechanics
- Mathematics Computer

## Faculty

The Department is privileged to have the gamut of highly qualified, experienced and specialized faculty with postgraduate and research degrees from the world-renowned Universities. 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 on national and international levels and has carved out a significant niche for themselves in their respective fields.

### B.S. Environmental Science

Environmental science is an interdisciplinary field that requires students to be challenged in combining skills and knowledge from different fields involving Chemistry, Physics, Geography, Earth and marine sciences, Biological and social sciences while focusing primarily on human impact on environment and how this impact can be channelize towards a more positive relationship between human and the ecosystem around him the idea is to combine multiple perspectives, disciplines and data sources, to build up a fuller understanding of natural and human environments.

**Mission**

The aim of launching this program is to provide an educational environment where quality education can be imparted to the youth and to involve various sectors of the society e.g engineers, technologists, doctors, policy makers, funding agencies, investors, importers, exporters, media educators and all sorts of professionals forming a joint effort to encounter environmental issues.

**Program Educational Objectives (PEOs)**

The graduates will be able to

**PEO-01:** Apply the knowledge of chemical and physical sciences to provide solutions of environmental problems through advance tools of the field.

**PEO-02:** Acquire skills necessary for the management of environmental problems in multidisciplinary environment and demonstrate moral and ethical values in fulfilling professional and societal obligations.

**PEO-03:** Commitment to continue learning for the professional growth of society and conservation of sustainable environment.

## Department of Management

**Professor**

Dr. Muhammad Shahid Rafique

**Assistant Professor**

Dr. Abdul Aziz Khan Niazi

Dr. Kanwal Iqbal Khan

**Introduction:**

BBA is a four-year undergraduate program that provides a strong foundation in all functional business areas. The students complete their business administration majors and can choose minors in human resource management, marketing or finance with an opportunity to study free electives from engineering and other disciplines offered at UET. This provides our graduates with a unique opportunity to develop networks and gain an understanding of technical areas in line with their career aspirations and entrepreneurial ventures. The program also focuses on holistic personality transformation of the students through general education, extra-curricular activities and participative learning activities.

**Courses of Study**

The department offers a degree program under the name and style of:

- BBA (Bachelors of Business Administration)

**Program Educational Objectives (PEOs)**

**PEO1:** To develop critical thinking skills through keen observation, free inquiry, and logical reasoning for creative problem-solving.

**PEO1:** To facilitate deep rooted transformation based on adherence to high ethical standards, social responsibility, and business professionalism.

**PEO1:** To produce graduates with an ability to synthesize knowledge of functional business areas for effective management in a dynamic business environment.

## Department of Computer Sciences

**Chairman**

Prof. Dr. Shahzad Asif

Dr. Qurat-ul-Ain

Dr. Raihan Abbas

Mr. Waqas Ali

Ms. Alina Munir

Mr. Danish Mohsin

**Associate Professor**

Dr. Muhammad Umar Qasim

Dr. Sheraz Naseer

**Lecturer**

Ms. Anam Iftikhar

Ms. Drakhshan Bokhat

Mr. Zeeshan Ramzan

Mr. Usman Ghani

Ms. Farwa Batool

**Graduate Assistant**

**Assistant Professor**

Dr. Farah Adeeba  
Dr. Muhammad Irfan Yousuf

Mr. Nadeem Iqbal  
Mr. Aizaz Akmal  
Ms. Namra Sheikh

Ms. Ghazala  
Ms. Maryam Manzoor

**Introduction**

The Department of Computer Science at the University of Engineering and Technology (UET) is one of the most prominent and oldest center of computer education in the country. To meet the growing demand of computer science education, UET established a Computer Science Department at its New Campus located in Kala Shah Kaku in 2016. The Department of Computer Science at the New Campus offers B.Sc. degree programs in Computer Science and Software Engineering; M.Sc. degree programs in Computer Science; and Ph.D. degree program in Computer Science. The Department is home to modern technologies and highly skilled faculty to prepare students for the jobs of the future.

**Courses of Study**

The Department offers the following degree programs

- B.Sc. Computer Science
- B.Sc. Software Engineering
- M.Sc. Computer Science
- Ph.D. Computer Science

**B.Sc. Computer Science****Mission**

To impart high quality computing education to the students in order to develop critical thinking, analytical skills and abilities to solve real-world problems for the technological and socio-economic development.

**Program Educational Objectives (PEOs)**

The Program Educational Objectives (PEOs) of the Computer Science program are to produce graduates who are ready to:

- PEO1:** Demonstrate theoretical and practical knowledge and skills of computer science to solve real-world complex problems.  
**PEO2:** Demonstrate professionalism, leadership qualities and engage in continuous learning of new developments in diverse fields of computing.  
**PEO3:** Communicate effectively work in a multidisciplinary team environment and exhibit an awareness of the professional and social responsibility by making an impact on the society in an ethical manner.

Year 1							
Semester 1				Semester 1			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
CS-161	Programming Fundamentals	3	1	CS-162	Object Oriented Programming	3	1
CS-102	Introduction to Computing	3	1	CMPE-222	Digital Logic Design	3	1
HU-102	Functional English	3	0	HU-240	Psychology	3	0
MA-123	Calculus	3	0	HU-111L	Communication Skills (Lab)	0	1
PHY-111	Applied Physics	2	1	MA-224	Multi-Variate Calculus	3	0
ME-100L	Workshop Practice	0	1	MA-343	Applied Probability & Statistics	3	0
				QT-101	Translation of the Holy Quran	1	0

Year 2							
Semester 3				Semester 4			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
CS-261	Data Structures and Algorithms	3	1	CS-262	Database Systems	3	1
HU-221	Technical writing and Presentation Skills	3	0	CS-263	Operating Systems	3	1
CS-271	Computer Organization and Assembly Language	3	1	MA-228	Differential Equations	3	0
MA-234	Linear Algebra	3	0	CS-272	Design and Analysis of Algorithms	3	0
CS-270	Discrete Mathematics	3	0	CS-273	Theory of Automata	3	0

				QT-201	Translation of the Holy Quran	1	0
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Year 3							
Semester 5				Semester 6			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
CS-364	Information Security	3	0	CS-373	Computer Networks	3	1
CS-371	Artificial Intelligence	3	1	CS-39x	Computer Science Elective-2	3	0
CS-301	Professional Practices in Software Development	3	0	CS-39x	Computer Science Elective-3	3	0
CS-39x	Computer Science Elective-1	3	0	CS-380	Graph Theory	3	0
CS-165	Software Engineering	3	1	CS-372	Parallel and Distributed Computing	3	0
				QT-301	Translation of the Holy Quran	1	0

Year 4							
Semester 7				Semester 8			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
CS-465	Final Year Project-I	0	3	CS-466	Final Year Project-II	0	3
CS-471	Compiler Construction	3	1	MGT-414	Entrepreneurship & Business Management	3	0
CS-49x	Computer Science Elective-4	3	0	IS-201	Islamic & Pakistan Studies-II	3	0
IS-101	Islamic & Pakistan Studies-I	3	0	HU-XXX	International Language	0	0
CS-49x	Computer Science Elective-5	3	0	MGT-424	Leadership Strategies	3	0
				QT-401	Translation of the Holy Quran	1	0

## B.Sc. Software Engineering

### Mission

The mission of the Bachelor of Science degree in Software Engineering is to educate students how to engineer and maintain software systems within onstraints and prepare them for lifelong learning. The program will produce successful professionals and entrepreneurs who can define, design, develop and deliver high quality software solutions while adhering to ethical and professional standards.

### Program Educational Objectives (PEOs)

The Program Educational Objectives (PEOs) of the Software Engineering program are to produce graduates who are ready to:

**PEO1:** be successful professionals in the field with sound knowledge of software engineering

**PEO2:** be lifelong learners who are ready to enhance their software engineering knowledge through self-learning and/or further education

**PEO3:** utilize and exhibit strong leadership, management, communication and interpersonal skills in multi-disciplinary environments

**PEO4:** demonstrate higher standards of professional integrity and moral values with positive impact on society and environment

Year 1							
Semester 1				Semester 1			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
CS-102	Introduction to Computing (ITC)	3	1	CS-162	Object Oriented Programming (OOP)	3	1
CS-161	Programming Fundamentals (PF)	3	1	IS-101	Islamic and Pak Studies-I	3	0
HU-102	Functional English (FE)	3	0	CS-163	Discrete Mathematical Structures (DMS)	3	0
MA-123	Calculus	3	0	CS-165	Software Engineering (SE)	3	1
PHY-111	Applied Physics (APH)	2	1	MA-116	Linear Algebra and Differential Equations	3	0
ME-100L	Workshop Practice (WP)	0	1	QT-101	Translation of the Holy Quran	1	0

Year 2							
Semester 3				Semester 4			
Course No	Subject	Credit Hours		Course No	Subject	Credit Hours	
		Th	Pr			Th	Pr
CS-261	Data Structures & Algorithms (DSA)	3	1	CS-263	Operating Systems (OS)	3	1
SE-221	Introduction to Human Computer Interaction	3	0	CS-262	Database System	3	1
SE-211	Software Requirement Engineering (SRE)	3	0	SE-222	Software Design & Architecture (SDA)	2	1

MA-343	Applied Probability & Statistics	3	0
HU-111L	Communication Skills LAB	0	1
QT-201	Translation of the Holy Quran	1	0

HU-240	Psychology	2	0
IS-201	Islamic and Pak Studies-II	3	0
MGT-103	Sociology for Engineering	2	0

## Year 3

Semester 5			
Course No	Subject	Credit Hours	
		Th	Pr
SE-323	Software Construction and Development (SC&D)	2	1
CS-366	Computer Networks (CN)	3	1
HU-221	Technical Writing and Presentation Skills	3	0
xx-xxx	SE-Elective-I	3	0
CS-3xx	SE-Supporting-I	3	0
QT-301	Translation of the Holy Quran	1	0

Semester 6			
Course No	Subject	Credit Hours	
		Th	Pr
SE-331	Software Quality Engineering	3	0
CS-364	Information Security	3	0
CS-301	Professional Practices in Software Development	3	0
SE-324	Principles of Web Engineering	2	1
xx-xxx	SE-Elective-II	3	0
CS-xxx	SE-Supporting-II	3	0

## Year 4

Semester 7			
Course No	Subject	Credit Hours	
		Th	Pr
SE-441	Software Project Management	3	0
SE-442	Software Re-Engineering	3	0
xx-xxx	SE-Elective-III	3	0
xx-xxx	SE-Elective-IV	3	0
MGT-414	Entrepreneurship and Business Management	3	0
CS-465	FYP-I	0	3

Semester 8			
Course No	Subject	Credit Hours	
		Th	Pr
xx-xxx	SE-Supporting-III	3	0
xx-xxx	SE-Elective-V	3	0
CS-466	FYP-II	0	3
MGT-424	Leadership Strategies	3	0
HU-xxx	International Language	0	0
QT-401	Translation of the Holy Quran	1	0



# FAISALABAD CAMPUS

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

**Campus Coordinator**

Prof. Dr. Muhammad Mohsin

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. Faisalabad being the third largest metropolis and a major industrial centre in the heart of Pakistan are the main reasons for choosing Faisalabad city for establishing a campus of UET. The campus has a spacious dedicated area of more than 220 acres of land provided by the Government of Punjab.

Healthy academic environment with highly qualified faculty members, state of the art laboratories, dedicated academic and administrative staff, industrial collaboration, co-curricular activities; all add to the development of competent and professional engineers and graduates at the campus. All the engineering programs of the campus are accredited by PEC as Level-2 (Washington accord-OBE based).

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, Department of Textile Engineering was established at Faisalabad. Following are the departments at the Faisalabad Campus:

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

Following undergraduate degrees are offered in the above stated departments:

- B.Sc. Electrical Engineering
- B.Sc. Mechatronics and Control Engineering
- B.Sc. Chemical Engineering
- B.Sc. Textile Engineering
- B.Sc. Environmental Science
- B.Sc. Computer Science
- B.Sc. Chemistry
- B.Sc. Mathematics
- Bachelor's of Business Administration (BBA)

## Department of Electrical, Electronics & Communication Engineering

**Chairman**

Dr. Muhammad Akram

Dr. Yasir Jamal

Dr. Haris Mahmood

Dr. Muhammad Yasir

Mr. M. Ali Raza

Ms. Munazza Sadaf

Mr. Muhammad Ibrahim

**Associate Professors**

Dr. Muhammad Akram

Dr. Faizan Dastgeer

**Lecturers**

Mr. Muhammad Ahsan ul Haq

Mr. Zain Shabbir

Mr. Waseem Arshad

Mr. Rameez Javed

Mr. Azeem Iqbal

Mr. Hassan Mujtaba

Ms. Ayisha Naeem

Mr. Zeeshan Ali Akbar

Mr. Mudassar Usman

Mr. Muteen Munawar

Mr. Mohsin Sheraz

**Assistant Professors**

Dr. Muhammad Nasir

Dr. Aashir Waleed

**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. The department offers 100% the same curriculum as that of Electrical department main campus, UET Lahore. Graduates of this department are not only part of all kind of Pakistan industry, (Power Houses, WAPDA, NTDC, Telecom, PTCL, Textile, Chemical, Software etc) but also placed internationally in countries like USA, UK, Europe, Australia, Singapore, Middle East. Some of our graduates are CEO's of their own companies and some are part of international academia after completing PhD's from highly ranked world universities.

### Courses of Study

The department offers:

- B.Sc. Electrical Engineering
- B.Sc. Computer Science
- M.Sc. Electrical Engineering

### Mission

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

### Program Educational Objectives (PEOs)

- PEO 1: Graduates will be able to opt a range of careers as manufacturing engineers, service engineers and entrepreneurs.
- PEO 2: Graduates will be able to be a part of international academia as students and researchers.
- PEO 3: Graduates will demonstrate higher standards of moral and ethical values.
- PEO 4: Graduates will be able to lead their teams, departments and organizations.

### Laboratories

The following laboratory facilities are available at the department

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Electric Circuits</li> <li>• Computer Labs</li> <li>• Semiconductor Devices</li> <li>• Electric Machines</li> <li>• Micro Processor Systems</li> <li>• Antenna and MicroWave</li> <li>• Analog Electronics</li> </ul> | <ul style="list-style-type: none"> <li>• Digital Electronics</li> <li>• Communication Systems</li> <li>• Power Electronics</li> <li>• Power Systems</li> <li>• Physics</li> <li>• Control Systems</li> <li>• Digital logic Design</li> </ul> |
|--|--|

## B.Sc. Computer Science

This century is witnessing an unprecedented demand for skilled computing professionals. Four-year B.Sc. Computer Science program at University of Engineering and Technology Lahore, Faisalabad Campus is equipped to produce highly skilled computing professionals to meet the ever-increasing demand in various areas ranging from business and industry to education and research.

### Mission

To impart high quality computing education to the students, in order to develop critical thinking, analytical skills and abilities to solve real-world problems, for the technological and socio-economic development.

**Degree Program**

The department is offering 4 years B.Sc. Computer Science program where students can opt for general CS electives or do specialization in Data Science, Artificial Intelligence, or Cyber Security. The B.Sc. Computer Science program is accredited by National Computing Education Accreditation Council (NCEAC). The department offers 100% the same curriculum as that of Computer Science department of the main campus, UET Lahore.

**Program Educational Objectives (PEOs)**

PEO-01: Graduates demonstrate theoretical and practical knowledge and skills of computer science, to solve real-world complex problems.

PEO-02: Graduates demonstrate professionalism, leadership qualities and engage in continuous learning of new developments in diverse fields of computing.

PEO-03: Graduates communicate effectively, work in a multidisciplinary team environment and exhibit an awareness of the professional and social responsibility, by making an impact on the society in an ethical manner.

**Facilities**

The Laboratories for the BSc Computer Science program are equipped with the latest fully networked computers. Multimedia projectors are installed in the classrooms and high-speed internet facilities are available in the labs, classrooms, and campus.

## Department of Mechatronics and Control Engineering

**Chairman**

Prof. Dr. Hassan Ijaz

Dr. Muhammad Awais Hafeez

Dr. Hashim Iqbal

Dr. Muhammad Usman

**Lecturers**

Mr. Dilruba Siddiqi

Mr. S. M. Umar

Mr. Zia ur Rahman

**Associate Professor**

Dr. Hafiz Farhan Maqbool

Dr. Imran Mahmood

Dr. Imran Ali

Dr. Asim Ghaffar

Mr. Umar Siddique Virk

Mr. Waqas Arshad

**Assistant Professors**

Dr. Nasir Ahmad

Dr. Ahmad Ali

Dr. Asif Ishfaq

Dr. Ammara Kanwal

Mr. Saqib Zafar

Mr. M. Imran

Mr. M. Tanveer Riaz

**Introduction**

Mechatronics and Control Engineering is an inter-disciplinary field that integrates the domains of Mechanical Engineering, Electrical Engineering, Computer Science, and Information Technology. This hybrid-engineering program was established to fulfill the ever-growing demands of industry and research sectors to tackle the problems associated to the control, automation, artificial intelligence, robotics and/or related areas. The department at Faisalabad Campus is equipped with state-of-the-art laboratories and highly qualified faculty to provide the students with a great learning environment. The department offers 100% the same curriculum as that of Mechatronics and Control Engineering department main campus, UET Lahore. Graduates of this department are working in the renowned industries of Pakistan and abroad.

**Courses of Study**

The department offers:

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

**Laboratories**

- Instrumentation and Measurement
- Automation
- Mechanics of Materials
- Circuits and Devices
- Fluid Mechanics
- Control Systems

- Engineering Mechanics
- Mechanisms
- Thermal Sciences
- Computer (Simulation) Lab
- Engineering Workshop
- Hydraulics and Pneumatics

### Mission

The department, through quality education and enabling environment, aims to nurture the professional engineers with the capability of designing complex mechatronic systems, serving current industrial needs and developing innovative technologies.

### Program Educational Objectives (PEOs)

To nurture Mechatronics engineer who

PEO-01: Can skillfully design and implement integrated solutions to general Mechatronics engineering problems

PEO-02: Is capable of developing professional skills, while adhering to high ethical values, to excel in industry, research organizations and succeed in entrepreneurial ventures

PEO-03: Can innovate and embark on new directions in advancing the Mechatronics technologies which have direct national and international relevance.

PEO-04: Is capable of contributing to diversity, socioeconomic growth, and sustainable development as a team member.

## Department of Chemical and Polymer Engineering

### Chairman

Prof. Dr. Syed Waqas Ahmad

Dr. Haji Ghulam Qutab

Dr. Abdul Rehman

Dr. Khalid Mehmood

### Lecturers

Ms. Iqra Saleem

Ms. Saba Gul

Mr. Aiman Shabbir

Mr. Muhammad Imran

Mr. Muhammad Mudassir

### Associate Professors

Dr. Faisal Saleem

Dr. Muhammad Danish

### Assistant Professors

Ms. Rabia Sharif

### 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. The BSc program in the chemical Engineering is currently accredited on Level-II.

### Courses of Study

The Department offers:

- B.Sc. Chemical Engineering
- M.Sc. Chemical Engineering

The Department follows the Mission and PEOs of the Chemical Engineering Department Lahore.

### 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 Textile Engineering

### Chairman

Prof. Dr. Muhammad Mohsin

### Associate Professor

Dr. Shaheen Sardar

### Assistant Professors

Dr. Aamir Abbas

Dr. Usama Bin Humayoun

Dr. Nasir Sarwar

### Lecturers

Ms. Sidra Ghaffar

Mr. Muhammad Ahsan

Mr. Khurram Shehzad Akhtar

Ms. Wardah Anam

Mr. Rehan Asghar

### Courses Offered:

- 1) B.Sc. Textile Engineering
- 2) M.Sc. Textile and Materials Engineering
- 3) Ph.D. Textile Engineering

### Introduction

The textile sector in Pakistan has an overwhelming impact on the economy, contributing 60% to the country's exports and 46% of the total industrial production. This sector also provides employment opportunities to 45% of country's workforce, which is one of the highest. In today's highly competitive global environment, the textile sector needs to upgrade its processes, machinery, supply chain, improve productivity, sustainability and maximize the value-addition for its survival; which cannot be realized without competent professionals in the relative field. Faisalabad campus is privileged over other campuses of UET for holding a degree awarding department in the field of Textile Engineering.

The course of study is the composite one and cover all four section of textile which include:

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

The department started offering Bachelor's in Textile in 2013, Master's in Textile and Materials Engineering in 2020 and Ph.D. in Textile Engineering in 2021; with highly qualified faculty and well-equipped laboratories. There is more than 150 lab scale equipment installed at the department of textile engineering in the following labs.

### Laboratories

- Mini Spinning Lab-complete range (Pakistan's first and only such lab)
- Pilot Spinning Lab
- Weaving Lab
- Knitting Lab
- Pre-treatment, Dyeing & Finishing Lab
- Wet Processing Research Lab
- Textile Chemical Synthesis and Polymerization Lab
- Testing Lab (Physical & Chemical)
- SEM and Digital Printing Lab
- Garment Manufacturing Lab
- Pattern Cutting Lab
- Textile Recycling Lab
- Textile Nano Materials Lab
- Textile Computer Lab



**Mission**

The mission of the department of textile engineering is to prepare engineers capable of solving complex textile engineering problems, using strong fundamental knowledge and modern ideas, thus serving the national industry while maintaining the international standards. All the 12 PLOs related to WA are adopted for the BSc Textile Engineering program.

**Program Educational Objectives**

**PEO-01:** Deal with contemporary challenges in the textile industry by using concepts and techniques of textile engineering and applied sciences.

**PEO-02:** Exhibit effective communication, and managerial skills, as team leaders as well as team members.

**PEO-03:** Develop their careers professionally giving due considerations to health and safety, socio-economic, environmental and ethical challenges.

**B.Sc. Textile Engineering**

Semester 1				Semester 2			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
TEX-101	Textile Engineering Fundamentals	2	1	IS-101	Islamic and Pakistan Studies-I	3	0
CY-105	Applied Chemistry-I	2	1	TEX-102	Textile Raw Materials and Science	2	1
ME-102	Mechanical Engineering Fundamentals	3	0	EE-199	Basic Electrical and Electronics Engineering	3	1
CS-103	Introduction to Computer Programming for Data Science	2	1	MA-106	Applied Mathematics	3	0
HU-104	Communication Skills	2	0	CY-106	Applied Chemistry	2	1
MA-105	Applied Mathematics-I	3	0	ME-100L	Workshop Practice	0	1
				QT-101	Translation of The Holy Qur'an-I	1	0

Semester 3				Semester 4			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
PHY-103	Applied Physics	2	1	TEX-205	Yarn Production Engineering	3	1
TEX-202	Yarn Preparatory Processes	2	1	TEX-206	Dyestuff and Color Science	3	1
TEX-203	Weaving Preparatory Processes	2	1	TEX-207	Clothing Anthropometry and Pattern Construction	2	1
TEX-204	Pre-treatment of Textiles	2	1	TEX-208	Computer Application in Textile	3	1
IS-201	Islamic and Pakistan Studies-II	3	0	QT-201	Translation of The Holy Qur'an-II	1	0
HU-205	Technical Writing	3	0				

Semester 5				Semester 6			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
TEX-301	Textile Testing and Quality Control	2	1	TEX-306	Advance Spinning techniques	3	1
TEX-302	Weaving Mechanisms and Advancements	3	1	TEX-307	Knitting Operations	3	1
TEX-303	Textile Dyeing and Printing	3	1	TEX-308	Textile Finishing	3	1
TEX-304	Sewn Product Engineering	3	1	TEX-305	Technical Textiles and Nonwovens	3	0
MA-205	Applied Statistics and Probability	3	0	MGT-318	Entrepreneurship and Management	2	0
				QT-301	Translation of The Holy Qur'an-III	1	0

Semester 7				Semester 8			
Course No	Subject (Pre-requisites)	Credit Hours		Course No	Subject (Pre-requisites)	Credit Hours	
		Th	Pr			Th	Pr
TEX-401	Specialty Yarns	2	1	TEX-404	Senior Design Project II	0	3
MGT-418	Engineering Management	3	0	TEX-405	Industrial Engineering in the Clothing Industry	3	1
TEX-403	Senior Design Project I	0	3	MGT-415	Environment, Health and Safety	3	0
TEX-406	Clothing Quality Control	3	1	QT-401	Translation of The Holy Qur'an-IV	1	0
HU-404	Professional Ethics and Procurement	3	0	TEX-402	Fabric Structure and Design	3	1

The Department is working in close collaboration with the top Pakistani textile industry. Department offer regular industrial tours and training to its textile engineering students as well as industrial expert and foreign lectures for the students at the department. There are lot of research going on in the department and department faculty have published over 200 papers, 10 patents and 6 international book chapters in last five years. Five Ph.D. students have successfully been co-supervised and completed their practical work in the textile labs of the department. Department has developed anti-viral masks, PPEs, innovative banana and okra fabric and other range of innovative products and processes. Department is the member of the Society of Dyers and Colourists, UK. Department also won the only prize for Textile Processing Technologies at the 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> Invention to Innovation Summit 2017, 2018 and 2019. Its textile engineering students have won the second place at the EU mask competition 2020.

There is 100% job placement for the graduates of the textile engineering department and around 75% of the students receive the job offer before the graduation. Graduates of the UET textile department are currently working in some of the top mills of the country like Nishat, Interloop, Crescent, Kamal, Master, Sapphire, CBL, Sadaqat, Artistic, Cotton web, Azgard 9, US Apparel, TTI, US denim and Masood textile etc. Since 2018, every year department of textile engineering organize three mega events of textile (International Conference on Sustainable Textile, Pakistan region SDC-UK textile design competition for students & Top Pakistani Textile Brands Tribute). 5<sup>th</sup> International Conference on Sustainable Textile 2022 was held on 1<sup>st</sup> December 2022. More than 550 student projects were displayed in the student competition 2022. Textile sustainability working group has also been announced at the 4<sup>th</sup> ICST conference and more than 280 textile industry and stakeholders are already part of this initiative.

## Department of Humanities, Basic Sciences and Islamic Studies

### Chairman

Prof. Dr. Sajjad Ahmad

### Associate Professor

Dr. Faisal Nawaz  
Dr. Ghufrana Samin  
Dr. Ilyas Ali

### Assistant Professors

Dr. Muhammad Aslam  
Dr. Abdur Rehman  
Dr. Arshi Khalid  
Mr. Kamran Shaheen  
Dr. Shazia Karim  
Dr. Muhammad Yasir

Dr. Sheeba Ghani

Dr. Nisar Ali

### Lecturers

Mr. Mohsin Sheraz  
Ms. Saira Zahid

### Introduction

The department of Basic Sciences and Humanities (BSH) was established in 2004 at FSD campus with an aim to provide high quality equitable foundation courses in basic sciences and humanities. Basic science & humanities courses are the backbone of the all the disciplines and programs. The department is privileged to have highly qualified, specialized and experienced faculty with degrees from the world-renowned Universities. The department with its highly qualified and professional faculty offers the bridge courses in mathematics, physics, chemistry, communication skills, Islamic and Pak studies to assist the students to get attuned to specialized domains of engineering and sciences. The syllabus of specialized courses has been designed to enrich the students' understanding towards the subjects with a view to helping them in encountering practical problems in real profession carriers. Recently the department has won various competitive research grants from HEC and PHEC under NRPU and Punjab innovation research challenge award scheme.

### Courses of Study

The Department of Basic Sciences and Humanities offers following programs:

- B.S. Environmental Sciences
- B.Sc. Chemistry
- B.Sc. Mathematics
- BBA
- M.Phil. Applied Chemistry

**Laboratories**

The department is equipped with various state of the art laboratories including wet analysis lab, general chemistry lab, Hi-tech Chemistry lab, Applied Physics and Chemistry Research lab. These laboratories possess cutting-edge equipment to enrich the learning experience of young minds with practical work. Hi-Tech Chemistry lab was established in 2015 to facilitate the research activities. The major instruments which are available include UV-visible Spectrophotometer, FTIR, Atomic Absorption Spectrophotometer, Rotary evaporator, digital Refractometer & Polarimeter and Sonicator etc.

**BS Environmental Sciences****Program Description**

BS in Environmental Sciences was started in Faisalabad campus in 2020. Environmental Sciences is an interdisciplinary subject which uses knowledge of Biology, Chemistry, Physics and other related subjects to understand natural processes and human impacts in the atmosphere, aquatic systems, and soils. The BS program is designed to prepare the students with concept, methods and field experience in the subjects including Environmental Microbiology, Air Quality, Water and Waste Water Treatment, Solid Waste Management, Environmental Chemistry, Water Resource Management and Sanitation, Environmental Laws and Policies, Environmental Hazards and Natural Disasters, Environmental Policy and Management, Occupational Hygiene, Health Safety and Environment and Environmental Ethics. The department has fully equipped laboratories and research units to support the teaching, learning and research activities. A variety of openings and career opportunities in government sector, industry, private companies and consulting firms are available for students graduating with a BS degree in Environmental Sciences.

**Mission**

The aim of launching this program is to provide an educational environment where quality education can be imparted to the youth and to involve various sectors of the society e.g engineers, technologists, doctors, policy makers, funding agencies, investors, importers, exporters, media educators and all sorts of professionals forming a joint effort to encounter environmental issues.

**Tentative Study Plan**

The department offers 100% the same PEOs and curriculum as that of BS Environmental Science of the new campus, UET Lahore.

**BS Chemistry****Program Description**

Chemistry is the core of all sciences. At FSD Campus, initially the department faculty was teaching chemistry in engineering departments. Gradually it grows and now department are offering BS Chemistry (Four years program), M.Phil (Two years Program) and PhD program is being planned. The department focuses on teaching the modern and practical knowledge of the field. The BS Program is designed to prepare the students with concept, knowledge, skills and with field experiences in subjects including Analytical Chemistry, Applied Chemistry, Biochemistry, Environmental, Fuel, Inorganic, Organic, Physical, Nuclear & Radio Chemistry. The main objective of the department of chemistry is to produce graduates of international standard in the established as well as emerging areas of chemical sciences. We owe highly qualified faculty members having training in diverse areas of specialization and publication in internationally recognized journals. We have well equipped labs having advanced instruments and research facilities. Our goal is to prepare and equip our students with creative potential so that they can make significant contributions towards society in local and global industries.

**Mission**

To create a transformative educational and innovative research experience for students focused on deep disciplinary knowledge, problem solving, leadership, communication and interpersonal skill and well-being.

**Tentative Study Plan**

The Department follows the PEOs and study plan of the Department of Chemistry, UET Lahore.

**BS Mathematics****Program Description**

Mathematicians seek truth, beauty and elegance, in mathematics itself and in our work with other disciplines. The BS program at UET Faisalabad Campus is established to train future mathematicians with comprehensive knowledge of math and its applications in various disciplines. The key feature of the BS curriculum includes better exposure of students to courses in the area of pure, applied and computational mathematics. The BS program is focused on the theoretical and

technology-based features of the course work and provide enthusiastic learning through class projects, interdisciplinary research and industrial collaborations. Our BS program traces excellence in all aspects of research, teaching and the communication of mathematics.

**Mission**

The mission of the department is to offer high quality applied and pure mathematics courses to our students. Our task is to equip our graduate students with the essential skills and knowledge to pursue research in mathematics at the highest international standards.

**Tentative Study Plan**

The Department follows the PEOs and study plan of Department of mathematics, UET Lahore.

**Bachelors in Business Administration (BBA)****Program Description**

The BBA program at UET Faisalabad Campus is organized to train future managers with the basic tools and techniques of business administration. The key features of the BBA curriculum include better exposure of students to courses in the areas of humanities and social sciences. The BBA program is exclusive in its own right. It is focused on the theoretical and practical features of the coursework and offers vital learning opportunities through class projects, field assignments and strong industry linkages. The BBA graduates have various professional aspects in Pakistan that will help them to have a successful career in future.

**Mission**

To prepare students with essential business knowledge and skills to achieve the requirements of the industry.

**Tentative Study Plan**

The Department follows the PEOs and study plan of IB&M, UET Lahore.

**Common Facilities at the Campus****Library and Book Bank**

**Senior Librarian** Mr. Mian Tahir Gohar

Campus has a spacious library and book bank. The library has an excellent collection of books related to engineering, sciences as well as literature. 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.

**Transport**

The campus has its own fleet of buses for the transportation of students living in Faisalabad. The fleet includes six buses. The fleet also serves for industrial visits as well as visits to the main campus and other universities for educational and Co-Curricular purposes.

**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. There are three boys and one girl hostel.

**Resident Tutors:**

Dr. Yasir Jamal, Dr. Abdur Rehman & Mr. Rameez Javed

**Internet & WIFI:**

The Campus has been provided with the 235 MB of dedicated bandwidth to provide internet facilities. Furthermore, WIFI and camera surveillance facilities have been extended throughout the Campus (all the academic buildings, library, offices, hostels) under Safe University Smart Campus (SUSC) by Higher Education Commission (HEC).

**Miscellaneous Facilities**

Campus has number of facilities including “on campus” medical health clinic run under the supervision of qualified medical doctor, spacious playgrounds, Indoor game facilities, gym, canteen, beautiful mosque having separate facility for boys and girls. Campus has a dedicated café, photocopy and printing facility for the students.

**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. An annual sports activity is observed at the campus as well as students participate in different sport events. Literary and cultural events add to the flavor of co-curricular activities, while 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 ensure better employability of our graduates and arrange training workshops and lectures by professionals from the industry. There are several scholarships available for campus students.

# RACHNA CAMPUS

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



**Incharge**

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 levels are being offered. All B.Sc. Engineering courses are accredited by the Pakistan Engineering Council.

**Undergraduate**

- B.Sc. in Electrical Engineering
- B.Sc. in Mechanical Engineering
- B.Sc. in Industrial & Manufacturing Engineering
- B.Sc. (Honors) Computer Science
- BBA
- B.Sc. Mathematics

## Department of Electrical Engineering

**Chairman, Department of Electrical Engineering**

Dr. Haroon Farooq, Associate Professor

**Assistant Professors**

Dr. Muhammad Naveed Akhtar

Muhammad Rehan Arif

Muhammad Usman Aslam

Moazzam Shehzad

**Lecturers**

Waqas Ali

Muhammad Usama

Irzam Shahid

Salman Tariq

Hira Ali Jamal

Saira Arif

The department of Electrical Engineering was established in 2003. Currently the department has a student enrollment of around 200. So far by year 2021-22, around 600 students have graduated from the department. The department offer undergraduate B.Sc Electrical Engineering Degree. The program is accredited with Pakistan Engineering Council. Being a constituent college of UET, Lahore. The Electrical Engineering Department follows the same curriculum as that of Electrical Engineering Department, UET, Lahore.

**Program Mission**

“To provide sound technical and educational training to students and equip them with skills necessary to carry on lifelong learning and growth in their professional careers. To prepare the students to become innovative, socially responsible and ethically groomed engineers in industry, business, research and academia.”

**Program Educational Objectives (PEOs)**

PEO-01: Utilize their skills and knowledge to solve real world Electrical Engineering problems

PEO-02: Demonstrate social and ethical responsibility in their professional careers

PEO-03: Pursue professional careers through continuous improvement in technical, managerial and communication skills

### Laboratories

The department currently has ten (10) well equipped dedicated laboratories to support program.

- Electronics Lab
- Microprocessors Lab
- Communications Lab
- Power Electronics Lab
- Power and Machines Lab
- Electric Circuits Lab
- Computer Lab
- Integrated Electronics Lab
- Control Systems Lab
- Workshop

## Department of Mechanical Engineering

### Chairman, Department of Mechanical Engineering

Dr. M. Salman Abbasi, Associate Professor

### Assistant Professors

Dr. Tariq Nawaz Chaudhary

Dr. Qasim Ali Ranjha

Dr. Ali Akbar

Mushtaq Ahmad

Humble Bin Khalid

Muhammad Qasim

### Lecturers

Muhammad Kashif Jamil

Aaqib Imdad

Jawad Ahmad

Hafiz Muhammad Suleman

Anas Rao

The department of Mechanical Engineering was established in 2003. Currently the department has a student enrollment of around 180. The department offers undergraduate B.Sc Mechanical Engineering degree program. The program is accredited with Pakistan Engineering Council under Level-II. The departmental faculty has successfully won various funded research projects.

### Program Mission

To produce engineers equipped with knowledge and skills to carry on lifelong learning through quality teaching and training. Our graduates shall be able to serve the society demonstrating professional ethics and social conduct.

### Program Educational Objectives (PEOs)

PEO-01: Apply knowledge to solve analytical and practical engineering problems.

PEO-02: Work for continuous professional and socio-technical development.

PEO-03: Demonstrate professional ethics, effective communication, and managerial skills.

### 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
- Mechanical Vibration

## Department of Industrial & Manufacturing Engineering

**Head of Department/ Teacher Incharge**

Dr. Muhammad Harris (Associate Professor)

**Assistant Professors**

Dr. Ubaid-Ur-Rehman Ghori  
 Mr. Muhammad Aslam  
 Mr. M. Mohsin Ahmad Sadiq  
 Mr. Muhammad Shahzad  
 Mr. Muhammad Awais Ahmad

**Lecturers**

Mr. Muhammad Nouman Khalid  
 Mr. Ahmad Sheraz Cheema

**Laboratories**

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

- Advanced Manufacturing
- Human Factor Engineering
- Computing lab
- Machine Tools and Machining
- Industrial Materials
- Manufacturing Processes
- Metrology and Quality Assurance
- Production and Operations Management
- Instrumentation and Control
- Plant Engineering
- Engineering Drawing

## Department of Computer Science and Engineering

**Chairman**

Dr. Abdul Jaleel (Associate Professor)

**Assistant Professors**

Mr. Shahid Islam  
 Dr. Tayybah Kiren  
 Dr. Natasha Nigaar

**Lecturers**

Mr. Noman Sohaib Qureshi  
 Ms. Amna Wajid  
 Ms. Natasha Nigar  
 Ms. Uroosa Bilal Chaudhry  
 Mr. Muhammad Shehzad Aslam  
 Mr. Abu Bakar Siddique

**Laboratories**

- Programming Lab
- Systems Lab

## Department of Natural Sciences, Humanities & Islamic Studies

**Chairman**

Dr. Adnan Aslam, Associate Professor

**Assistant Professors**

Dr. Majid Hussain  
 Dr. Syed Mazhar Shah  
 Dr. Atta-ur-Rehman Makhdoom  
 Mr. Liaquat Ali Tahir

Dr. Muhammad Abdullah

**Lecturers**

Ms. Faiza Bushra  
 Mr. Ahmad Ali

**Common Facilities****IT Facilities**

An on campus state-of-the-art computer laboratory provides research and simulation facilities to the students. Moreover, high speed internet facility providing access to international research journals is also available at library.

**Library**

There are more than 6000 books of various disciplines available at the library. The college also has access to the digital library (having more than 25,000 eBooks) being maintained by UET, Lahore. Information Resource Lab is set up in the library, which is equipped with various computers and Internet facility. Under Mega Project funded by HEC, Rs. 30 millions has been reserved for the construction of new main central library.

**Accommodations**

There are five hostels with the capacity of 350 students. There is separate hostel for female students. All hostels are equipped with the internet facility.

### Transport

Transport is provided to the 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 medical centre with all necessary medicines is being managed by a MBBS Doctor who is on the roll of the College and available round the clock. The college also has an ambulance for medical emergencies.

### 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. Currently the College has 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 (CDES)
- Literary and Debating Society (LDS)
- Blood Donating Society (BDS)
- Rachna Students Support Society (RSSS)
- Society of Electrical Engineering Department (SEED)
- Institute of Electrical & Electronics Engineers, RCET Chapter (IEEE)
- American Society of Mechanical Engineering, RCET Chapter (ASME)
- Society of Industrial and Manufacturing Engineering (SIME)
- Prosoft Society of Computer Science

# NAROWAL CAMPUS

- Department of Electrical Engineering
- Department of Computer Science and Engineering
- Department of Mechanical Engineering
- Department of Civil Engineering
- Department of Bio-Medical Engineering
- Department of Basic Sciences & Humanities

Campus Coordinator

**Prof. Dr. Muhammad Shahbaz**

University of Engineering and Technology Lahore, Narowal Campus established in 2012, offers multiple Bachelor's level Engineering Programs. Engineering Classes initially started in post Graduate Block of Islamic Degree College Narowal on temporary basis in 2012. Currently Narowal Campus is shifted to its own state of the art \ under construction buildings situated at around 10 Km from Narowal city on Muridky Narowal road. The beautiful architecturally designed buildings are constructed on a vast land of around 200 acres which has been arranged by Government of the Punjab. Around 750 students are studying in this campus in different engineering disciplines of Electrical, Mechanical, Civil, Computer Science & Engineering and Biomedical Engineering Programs.

## Department of Electrical Engineering

### Professors

Prof. Dr. Syed Zubair

### Assistant Professors

Dr. Rana Tariq M. Ahmad (On Leave)

Dr. Khurram Hashmi

Ms. Asia Rafique

Mr. Osama Bin Naeem

Mr. Muhammad Haseeb

### Associate Professors

Dr. Waqas Tariq Toor (Chairman)

### Lecturers

Mr. Amna Javeed

Mr. Shahbaz Bashir

### Mission

To provide comprehensive knowledge of Electrical Engineering to the students and to equip them with necessary skills so that they may lead fulfilling and rewarding careers. To prepare the students so that they become Electrical Engineering professionals of highest caliber.

### Introduction

Department of Electrical Engineering, Narowal Campus started working in 2012 at UET Lahore, Narowal. The mission of Electrical Engineering Department is to ensure understanding and application of electrical engineering fundamentals by inculcating analysis and design skills for the betterment of humanity and to become a center of excellence in the field of electrical engineering.

We are committed to develop an array of skills and techniques, personal qualities and attributes essential for successful performance in working life and thereby enabling learners to make an immediate contribution to the industry and academia. The true spirit of the Electrical Engineering Department lies in its simple maxim; "Quality Education with affordable Fee Structure". Here the students are given the sterling opportunity to get education of highest standards in pleasant and friendly atmosphere, and to make compatible with their means. The students are laudably facilitated with Well-equipped Laboratories, Multimedia Assisted Classrooms, Innovation Center, unlimited Scholarships and consistently Updated Library.

### Program Educational Objectives (PEOs)

**PEO-01:** The graduates will acquire the knowledge and concepts of Electrical Engineering and the underlying principles of basic sciences and will utilize these skills to solve diverse Electrical Engineering problems in any professional setting.

**PEO-02:** The graduates will demonstrate passion to pursue lifelong learning related to concepts of mathematics, science and Electrical Engineering and because of this, they will be able to capture innovative concepts in the field of Electrical Engineering in higher education and industry.

**PEO-03:** The graduates will be active members of any organization that they aspire to join, and they will be proficient in team work and will demonstrate leadership in any professional setting.

**PEO-04:** The graduates will be able to display professionalism and uphold ethical values as responsible citizens and they will be aware of environmental challenges and sustainability issues which may arise from time to time.

### Alumni



Six batches of Electrical Engineering Department with a total of 205 students have graduated and the alumni are working in various national and international organizations.

### Regulatory Status

The undergraduate program of Electrical Engineering at Narowal Campus is accredited by PEC.

### Laboratories

The department has the following well equipped laboratories which fulfill the academic needs of students and faculty:

1. Electric Circuits Lab
2. Electronics Lab
3. Systems Lab
4. Electrical Workshop and FYP Lab
5. Electrical Machines Lab
6. Computer Lab

### Extra-Curricular Activities

Seminars, Project Exhibitions, and workshops etc. are managed by IEEE Society, under the supervision of Department.

## Department of Computer Science and Engineering

### Associate Professor

Dr. Muhammad Idrees (HoD)

### Assistant Professor

Dr. Mubashar Saddique

### Lecturers

Mr. Yaseen ul Haq  
 Ms. Iqra Muneer  
 Ms. Saadia Tariq  
 Ms. Fatima Shahzadi  
 Ms. Rabia Zafar

### Introduction

Department of Computer Science and Engineering, Narowal Campus started working in 2014 at UET Lahore, Narowal. The mission of Computer Science and Engineering Department is to equip the students with up-to-date curricula of Computer Science and Engineering disciplines, to ensure that the students have the solid foundations in core concepts in computing, to train them in problem solving and decision making skills and to prepare them for lifelong learning in the discipline. We are committed to develop an array of skills and techniques, personal qualities and attributes essential for successful performance in working life and thereby enabling learners to make an immediate contribution to the computing industry. The true spirit of the Computer Science and Engineering Department lies in its simple maxim; **“Quality Education with affordable Fee Structure”**. Here the students are given the sterling opportunity to get education of highest standards in pleasant and friendly atmosphere, and to make compatible with their means. The students are laudably facilitated with Well-equipped Laboratories, state of the art Computer Labs with Internet Facility, Multimedia Assisted Classrooms, Innovation Center, unlimited Scholarships and consistently Updated Library. One of the most admirable features of Computer Science and Engineering Department at Narowal campus is its Highly Educated Faculty.

### Program Educational Objectives (PEOs)

**PEO-01:** Excel in a career utilizing their education in Computer Science.

**PEO-02:** Continue to enhance their knowledge.

**PEO-03:** Be effective in multidisciplinary and diverse professional environments.

**PEO-04:** Provide leadership and demonstrate professional integrity.

### Alumni

Four batches of Computer Science and Engineering Department with a total of 110 students have graduated and the alumni are working in various national and

international organizations.

### Programs

B.S. Computer Science

### Regulatory Status

The undergraduate program of Computer Science and Engineering Department at Narowal Campus is accredited by NCEAC (HEC).

### Laboratories

The department has the following well equipped laboratories which fulfill the academic needs of students and faculty:

1. Programming Lab
2. Software Engineering/Database Lab
3. General Purposes Lab
4. Network/Operating System Lab
5. FYP Lab
6. Digital Logic Design Lab
7. Hardware Lab

### Extra-Curricular Activities

Gaming Competitions, Software Exhibitions, Free-lancing, Sports Activities, Annual Dinners, Debating Activities, etc. also managed by CODATOR Society, under the supervision of Department.

## Department of Mechanical Engineering

### Assistant Professor

Dr. Saqlain Abbas (HOD)  
Dr. Aqib Mashood

### Lecturers

Mr. Nazim Waheed  
Mr. Tanveer Mukhtar  
Mr. M. Lolak

Mr. Umar Ishaq

Mr. Asif Jalal  
Mr. Sufyan Matloob

### Mission

To produce mechanical engineers equipped with knowledge and skills to carry on lifelong learning through quality teaching and training. Our graduates shall be able to serve for the sustainable development of the society while demonstrating professional ethics and responsible social conduct”

### Introduction

The department of Mechanical engineering was established in 2012. Currently it has an enrolment of 152 students at undergraduate level. So far by year 2022, six batches holding 233 students have graduated from the department and are serving at both national & international level. The department was established with the following program educational objectives (PEOs).

### Program Educational Objectives (PEOs).

**PEO-01:** Apply the knowledge to solve analytical and practical mechanical engineering problems. (Engineering Capabilities)

**PEO-02:** Work for the continuous professional and sustainable socio-technical development. (Societal Development and Lifelong Learning)

**PEO-03:** Demonstrate professional ethics, effective communication and managerial skills. (Ethics, Management and Communication)

### Programs Offered

- B.Sc. Mechanical Engineering

**Laboratories**

- Engineering Mechanics
- Fluid Mechanics
- Hydraulic Machinery
- Mechanics of Materials
- Mechanics of Machines
- Workshops
- Metrology & Quality Assurance
- Computer lab

## Department of Civil Engineering

**Assistant Professors**

Dr. Muhammad Shoaib Karam (HoD)  
Dr. Muhammad Tahir

**Lecturers**

Ms. Sehrish Khan  
Mr. Intezar Hussain  
Mr. Muhammad Mohsin  
Mr. Adeel Faisal  
Mr. Sohail Ahmad

Mr. Usman Anwar  
Mr. Ahad Ali  
Mr. Muhammad Usman

Department of Civil Engineering at Narowal campus was established in 2013. First batch of Civil Engineers was graduated in 2017 and almost all are employed. Around 150 students are currently enrolled in Civil Engineering Department in different sessions. The Department has highly qualified faculty from Germany, Japan, China and Pakistan.

The Department of Civil Engineering excels in innovative teaching and research, in developing practical applications and approaches to problems associated with theory and practice of construction field, and in making professionals and leaders who will have worldwide influence on technologies and societies.

**Program Offered**

B.Sc. Civil Engineering

**Mission**

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

**Program Educational Objectives (PEOs)**

- **PEO-1.** Graduates demonstrate their proficiency of applying the knowledge & skills to solve complex Civil engineering problems.
- **PEO-2** Graduates communicate effectively and contribute in the project team.
- **PEO-3.** Graduates uphold principles of ethics and integrity throughout their professional practices.
- **PEO-4.** Graduates engage themselves in continuous professional learning process.

**Alumni**

Six batches of Civil Engineering Department have graduated, and the alumni are working in various national and international organizations. Some of them are working as entrepreneurs and freelancers as well.

**Regulatory Status**

The undergraduate program of Civil Engineering at Narowal Campus is accredited by PEC.

**Laboratories**

The department has the following well equipped laboratories which fulfill the academic needs of students and faculty:

- Surveying
- Geotechnical Engineering
- Computer
- Concrete
- Environmental Engineering
- Fluid Mechanics
- Engineering Mechanics

## Department of Bio-Medical Engineering

**Assistant Professor**

Dr. Muhammad Rehan Chaudry (HOD)  
Dr. Muhammad Umair Ahmad Khan

Dr. Hafiz Muhammad Salman Ajmal

Dr. Sameen Ahmed Malik  
Dr. Bisma Rauff

**Lecturer**

Ms. Umber Warraich  
Mr. Abdul Hanan Taqi  
Mr. Muhammad Hamza Zulfiqar

Biomedical Engineering is an interdisciplinary field that takes design concepts from multiple science and engineering domains including Electrical, Mechanical, Computer Science, Mathematics, Physics and Biology. Biomedical engineers are professionals who can effectively integrate the knowledge from the fields to design solutions for health industry in the areas of clinical equipment management, implantable medical devices, rehabilitation, medical robotics etc. Today, with the increasing progress in the medical science, there is a growing demand for technical experts who understand complex engineering challenges and work closely with the healthcare professionals for a continuous improvement in human health standards.

University of Engineering and Technology Lahore, Narowal Campus is keenly interested to offer a bachelor's degree in biomedical engineering strongly driven towards design and research in Biomedical Instrumentation, Biomedical Signal and Image Processing, Biomechanics and Biomedical Modeling & Simulation. A budget of Rs. 175 million has been allocated and state of the art laboratory facilities are being furnished to meet the needs of the modern curriculum.

**Program Offered**

B.Sc. Bio Medical Engineering

**Mission**

To become the leading program of Biomedical Engineering by imparting methodical educational training to our students and preparing them to become innovative and socially responsible engineers in health care research and industry.

**Program Education Objectives (PEOs)****PEO-01 Knowledge and Skills**

Our graduates will solve application-level problems related to Biomedical Engineering.

**PEO-02 Interpersonal, Leadership and Work Ethics**

Our graduates will work effectively as a team member and lead multidisciplinary teams while demonstrating the interpersonal and managerial skills, and ethical responsibilities.

**PEO-03 Socio-economic and Life-long learning**

Our graduates will pursue higher education, research and professional advancement to develop sustainable solutions fulfilling societal needs.

**Laboratories**

The department has the following well equipped laboratories which fulfill the academic needs of students and faculty:

1. Electric Circuits
2. Electrical and Electronics
3. Anatomy and Physiology
4. Electromechanical System Technologies

## Department of Basic Sciences & Humanities

### Assistant Professor

Dr. Habib Hussain (HoD)  
Dr. Muhammad Yousuf

Dr. Imran Aslam  
Dr. Absar Ul Haq

### Lecturers

Mr. Muhammad Zeeshan Ashraf  
Mr. Tahir Shahzad

Ms. Farheen Samra  
Ms. Rabia Shaukat  
Ms. Anjum Naseem Rao  
Mr. Muhammad Ishaq Malik  
Mr. Hafiz Abdullah Saleem  
Ms. Iqba Javed

### Introduction

Basic Sciences and Humanities (BS&H) department was established in 2012 in UET Lahore, Narowal campus. To inculcate quality education, 10 highly qualified faculty members have been employed. The department offers BS programs in Chemistry, Physics, Mathematics and focuses to enhance theoretical knowledge and practical expertise of students. The department also shares its faculty members to teach courses of Chemistry, Physics, Mathematics, Communication skills, Business administration, Psychology and Pakistan & Islamic studies, in connection with all the programmes offered by Engineering departments. The department aims to provide the students with a broad perception and incorporate in them the idea of integrated nature of engineering and social aspects of professional life. The department also provides trainings to increase linguistic proficiency.

### Mission

To awaken young minds and unleash their talents in both theory and practice, through innovative teaching methods.

### Program Offered

- B.S. Chemistry
- B.S. Physics
- B.S. Mathematics

### Laboratories

The department has following well-equipped laboratories to fulfill academic needs of students and faculty as well:

- Chemistry Lab
- Physics Lab
- Computer Lab

# **Rules & Regulations Relating to Admissions, Examinations & Discipline**

## 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) "Chairperson" means the Chairperson 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.
- g) 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.

### 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.



# UNDERGRADUATE 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 B.S.) 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, Business Administration and Business and Information Technology. B.S. degree is offered in Chemistry, Mathematics and Physics.
- 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-requisite" 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, Business and Information Technology, Chemistry, Environmental Science, Food Science and Technology, Mathematics, Physics 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 a second re-admission if he is separated a 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".

- 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 **134** to a maximum of **140** for degree programs with minimum duration of four academic years and from a minimum of **166** to a maximum of **174** 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 19 credit hours during fall and spring semesters.
  - ii. Students of third year and beyond may be allowed to register in at most 22 credit hours during fall and spring semesters.
  - iii. At most 8 credit hours during summer semester.
- 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 that 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.
- b) Subjects are classified as:
  - i. "Theory" wherein the primary mode of teaching shall be lectures given by teachers supplemented by home assignments. For the purpose of these regulations, subjects of this type shall be referred to as Type-A;
  - ii. "Practical" wherein the primary mode of teaching shall be experiments, studio laboratory, designs, drawings, assignments and projects conducted/executed by students as specified in the syllabus. For the purpose of these regulations, subjects of this type shall be referred to as Type-B;

- iii. "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. Chairperson 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;
  - 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	WF	I	IP
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:

$$GPA = \frac{\sum_{i=1}^n (GP_i \times CH_i)}{\sum_{i=1}^n CH_i}$$

where  $n$  is the number of subjects in the semester for which GPA is being computed.

$$CGPA = \frac{\sum_{i=1}^m (GP_i \times CH_i)}{\sum_{i=1}^m CH_i}$$

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 and Cumulative Grade Point Average 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) 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 6<sup>th</sup> study week during fall and spring semesters and up to 3<sup>rd</sup> 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".
- b) If a student withdraws from a subject, which he is repeating, the previous grade earned will be retained in computation of CGPA and in assessing degree completion requirements.

### 12.2 Forced Withdrawal ("WF" Grade)

- a) 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 Forced Withdrawal (WF) 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".
- b) If a student is withdrawn from a subject, which he is repeating, the previous grade earned will be retained in computation of CGPA and in assessing degree completion requirements.

- c) A student who does not drop a subject nor appears in any assessment instrument will not be eligible for a "WF" grade and will be awarded an "F" grade.

### 12.3 Incomplete "I" Grade

A student, who because of illness or any other acceptable reason fails to complete the required instruments in any subject may be awarded an Incomplete (I) grade as an interim grade. Students having less than 50% attendance will not be eligible for award of this grade. This grade shall appear in the transcript temporarily until it is replaced by the actual grade and will not be treated as an "F" grade. The student 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, i.e., spring semester for an "I" grade awarded in fall semester and fall semester for an "I" grade awarded in spring semester, his "I" grade would be converted to an "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 an "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 calculation of CGPA.

## 14.0 Probation and Separation

### 14.1 Academic Probation

A student will be placed on academic probation if his CGPA falls below 2.0 after any semester.

### 14.2 Separation

- a) A student will be separated from the University if he remains on probation for a number of consecutive semesters as per schedule given below:
- First year students as defined in these regulations: Two consecutive semesters. Advantage of repetition during summer, falling in between or after the two regular semesters on probation, being given to the student.
  - Second year students as defined in these regulations: Three consecutive semesters. Advantage of repetition during summer, falling in between or after the two regular semesters on probation, being given to the student.
- b) Students after completing their second year as defined in these regulations will not be separated on account of academic probations.
- c) A student would be separated from the University if he requires extension beyond one year in the maximum permissible period for completion of degree requirements.
- d) Students who do not register in any subject during their first semester after admission will be separated from the University.
- e) Students have the option to freeze or skip a semester by not registering in any subject during that semester (other than first semester). However, they will be separated if they do not register in any subject in a semester without intimating their decision to the Students Section.

### 14.3 Disposal of Separated Students

- a) Separated students can apply to the Vice-Chancellor for re-admission. If their application is accepted, Examination branch will transfer subjects from the previous registration in accordance with the prescribed rule and assign them to an Entry Session for computing their maximum degree duration. They will be allotted a new registration number.
- b) A re-admitted student will be required to pay the admissible dues for one extra year even if he completes his degree requirements with his original entry session or a semester later.
- c) A re-admitted student will not be granted a second re-admission if he is separated a 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 a 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 Chairperson 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.

### 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 Chairperson 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 be awarded to students having earned degree with honours. The awards will be based on the CGPA earned at the time of graduation. Comparison will be made within the students of same entry session graduating in the minimum permissible duration. Immigrating and re-admitted students will not be eligible for any medal or merit position.

### 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 Dean's Honour Roll for summer semester.

### 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 Chairperson 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 Chairperson 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 Chairperson's office stating the specific reason for change in grade. Grade Change requests must be submitted no 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's Chairperson has the authority to evaluate the situation and change a grade, if required. When a grade is to be changed, the Chairperson 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 and Hostel Accommodation**

- 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 three 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) 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.

### **20.0 Deferment of Studies (Freezing)**

- a) Students enrolled in the first semester cannot apply for deferment.
- b) There shall be no relaxation in the maximum degree duration period for students seeking deferment.
- c) A student may defer studies for at most two consecutive regular semesters, for medical or other circumstances beyond his control, with summer semester not being counted. In such cases, the student shall apply (Form 4) to the Chairperson concerned, at least 15 days before the commencement of the semester, for approval of deferment by the concerned Dean. CAC, after approval, shall notify deferment for a specified period.

### **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. Chairperson 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 student after approval of the Chairperson 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%.



# EXAMINATION 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 answer books of mid-term and final examinations.
- 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 Chairperson 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.
- 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 Chairperson for record only.

### 1.6 Delay in Submission of Results

After passage of six 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 fate 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

- a) All question papers are set by the concerned teacher.
- b) The paper setters, who also ensure their correctness, supervise the photocopying or duplicating of the papers.
- c) 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 Chairperson 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's academic calendar.

### 2.4 Conduct of Mid-Term and Final Examinations

- a) The Chairperson 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 twenty-five 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 book is to be used in this case.
  - 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 Chairperson's office at the end of each examination.

### 2.5 Teachers or Staff acting as invigilators are detailed by the respective Chairperson. They ensure the following:

- a) That the students are identified through means such as University identification card or a valid photo ID.
- b) 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.
- c) That the students are not allowed to talk with or copy from other students during the examination.
- d) That no student is allowed to join the examination thirty minutes after its commencement.
- e) That no student is allowed to submit the answer sheet and leave the examination room within thirty minutes of commencement of examination. Visits to toilets are carefully controlled.
- f) 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 Controller of Examinations. The superintendent records all available evidence to be used as proof later on.

- g) 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 hooliganism 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.

#### **3.0 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 Chairperson.

#### **4.0 Transfer of Credits of Subjects For Migrated Students**

- a) Students from other HEC approved universities and programs accredited by PEC or PCATP, may apply for migration to this University in the same programs, in accordance with University's Migration Rules. Following conditions shall govern transfer of 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.
- b) The accumulative credits accepted for transfer in any program should not exceed one-half (50%) of the total credits required to complete that particular program, in any case.
- c) The credits transferred are counted towards the degree requirements of the student. However, GPA of transferred credits shall not be counted towards the calculation of CGPA, and that only "Transferred" shall be written against those 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.
- d) 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.

#### **5.0 Transfer of Credits of Subjects For Newly Admitted/Re-admitted Students**

*(Newly admitted students in this clause implies those students who have been permanently separated from UET and have secured admission as fresh students after completing the UET admission process)*

"Subjects" and "grades of subjects", studied during the previous five years from the date of re-admission, in which 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 or newly admitted students availing this facility shall neither be eligible for a merit position nor degree with Honours.

#### **6.0 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.

### **7.0 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.

### **8.0 Exemption of Credits For Students Admitted on the Basis of B.Sc. Engineering Technology or Equivalent Degree**

Subjects studied in the first two semesters of the engineering program in which the student has been admitted shall stand transferred. The credits transferred will be 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 has been allowed. In addition, such students shall be eligible for a merit position and degree with Honours if they so qualify.

### **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:

- i. The transcript will be chronological showing all subjects registered in each semester and corresponding grades earned.
- ii. All "I" grades would be replaced by the grade earned or "F" grade if requirements have not been completed.
- iii. "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.
- iv. 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.
- v. 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.

## 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 Ph.D. 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.
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. 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 maintained 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 2021, 2022, etc.
  - PP: Program like B.Sc., M.S., M.Phil. or Ph.D.
  - 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 temporary University ID 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 to pay all the 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 or 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/-
  - Fee per course including any laboratory, if applicable: Rs 20,000/- (UG)/Rs 25,000/- (PG)

## MIGRATION REGULATIONS

1. Subject to the provision of Regulations, the Vice-Chancellor may admit a current student to the University by migration from other HEC approved Universities or Institutions accredited by PEC/PCATP/IPP in relevant discipline on open merit under category "A1" or self-support under category "A2" according to the regulations.
2. 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.
3. No migration shall be allowed into UET, its campuses/college and into its affiliated institutions from within its constituent campuses/college and affiliated campuses/colleges.
4. Admission by migration shall not be allowed ordinarily after the expiry of three weeks from the commencement of the session.
5. 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.
6. No student shall be admitted to First Year and Final Year classes by migration. In terms of semesters, migration is only permissible into the 3<sup>rd</sup>, 4<sup>th</sup> or 5<sup>th</sup> semester.
7. A migrated student is required to complete at least 50% curriculum, required for award of the degree, at UET in order to be eligible for UET's degree.
8. 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 intends to migrate and that no disciplinary action is pending against him.
9. The applicant must have appeared in the Combined Entry Test conducted by UET Lahore of the same session in which he was admitted in parent university. In case, he has not appeared in UET entry test then he must have appeared in the entry test of UET Peshawar or MUET Jamshoro or NED Karachi or the one conducted by HEC Islamabad of the same session in which he was admitted in parent university. In case of the candidate of University/Institution is abroad, he must have appeared in the SAT of same year in which he obtained admission in the parent university. The applicant will provide certified copies of the transcript and approved course outline from his parent university. The SAT result card must be sent to UET Lahore directly from Educational Testing Service (ETS).
10. The applicant must have passed Intermediate (Pre-Engineering) or its equivalent with at least 60% marks and 50% weighted aggregate based on 70% weight to Intermediate marks and 30% weight to Entry Test marks.
11. 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.
12. No student admitted to any University or Institution against seats reserved for special categories shall be eligible for admission by migration.
13. No applicant shall be admitted by migration who possesses less than 1% of admission merit of this university as well as the sub-campuses of that year in which he was admitted in his parent institution.
14. No student shall be migrated to the University who carries any of his papers of his previous years/semesters or having subject with "I", "W", "F" and "WF" grades.
15. No applicant shall be admitted by migration whose parent institution is within the same city. However, he may be considered for admission by migration to sub-campuses of this university.
16. Migration application will only be entertained on the prescribed application form, obtainable from UET websites <http://www.uet.edu.pk> or <https://admission.uet.edu.pk> from the downloads section. Migration form fee of Rs. 1,000/- will be paid at the time of submission of application form.
17. Transfer of credits of subjects for migrated students (see 4.0 in Examination Regulations).
18. Migration fee shall be charged at the time of admission, from the candidates allowed to migrate to the University from other Universities/Institutions under the rules at the following rates:
  - I. Rs: 500,000/- (Rupees five hundred thousand only) in case of candidates of Universities/Institutions abroad.
  - II. Rs: 400,000/- (Rupees four hundred thousand only) from applicants admitted elsewhere in Pakistan in private universities or Self-support/Self-finance basis in public universities.
  - III. Rs: 50,000/- (Rupees fifty 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. The applicant shall pay prescribed semester dues of the category in which he got admission, in addition to the migration fee.

# CODE OF ETHICS



In the name of Allah, the Beneficent, the Merciful

Whereas Allah enjoineeth upon his men faithfully to observe their trusts and their covenants;

- that professional expertise is a sacred trust entrusted to those whom Allah in his magnificent bounty has endowed with this skill and knowledge;
- that every member of the profession shall appreciate and shall have knowledge as to what constitutes this trust and covenant and that a set of dynamic principles derived from the Holy Quran shall guide this conduct in applying his knowledge for the benefit of society,

It shall be incumbent upon the members of the professional community to subscribe to individually and collectively and to uphold the honour and dignity of their profession:

1. "Allah commands you to render back your trusts to those to whom they are due, and that when you judge between people you judge with justice. Allah admonishes you with what is excellent." (4:58)
  - You shall be honest, faithful and just, and shall not act in any manner derogatory to the honour, integrity or dignity of their profession.
2. "And let not hatred of a people incite you not to act equitably. Be just that is nearer to observance of duty." (5:8)
  - You shall not injure, maliciously, directly or indirectly the reputation or employment of another Engineer, nor shall you fail to act equitably while performing professional duty.
3. "Give full measure and weight justly and defraud not men of their things and act not corruptly in the land making mischief." (11:85)
  - You shall use your knowledge and skill of engineering for human welfare and render professional service and advice which reflects your best professional Judgement.
4. "And swallow not up your property among your selves by false means, nor seek to gain access thereby to the judges, so that you may swallow up a part of the property of men wrongfully while you know." (2:188)
  - You shall not abuse your position or power, nor accept illegal gratifications of any sort.
5. "Fulfil the obligations." (5:1)
  - You shall faithfully observe and fulfil all your obligations.
6. "And speak straight words." (33:70)
  - You shall express your opinion on professional or other matters in a frank, open and straight forward manner.
7. "Avoid most of suspicion for surely suspicion in some cases is sin; and spy not nor let some of you backbite others." (69:12)
  - You shall not criticize another professional's work without his knowledge nor malign, or injure his professional reputation.
8. "Ye who believe. Let not some men Among you laugh at others. It may be that the (latter) are better than the (Former); Nor let some women Laugh at others: It may be that the (latter) are better than the (Former)" (49: 11)
  - You shall not ridicule fellow professional nor let one professional discipline deride other disciplines or professions.
9. "Nor defame nor be sarcastic to each other. Nor call each other By (Offensive nicknames)" (49:11)
  - You shall not directly or indirectly discredit other professionals nor assign (derogatory) epithets to their persons or work.
10. "And follow not that of which thou hast no knowledge. Surely the hearing and the sight and the heart, of all these it will be asked." (17:36)
  - Your professional advice shall be based on full knowledge of the facts and honest conviction, and you shall not write articles or advertise in self laudatory language or in any manner derogatory to the dignity of the profession.
11. "O ye who believe: If a wicked person comes to you with any news, Ascertain the truth lest Ye harm people unwittingly." (49 :6)
  - You shall ascertain facts before accepting them and shall not encourage or cause others to carry tales. Credulity is no credit.
12. "And help one another in righteousness and piety and help not one another in sin and aggression and keep your duty to Allah." {5:2)
  - You shall help one another in upholding and doing what is right and shall not associate with those who transgress and those who indulge in unethical practices.
13. "And forget not kindness among yourselves." (2:237)
  - You shall be kind and considerate to others and shall not fail to be co-operative and accommodating.
14. "And whose affairs are decided by counsel among themselves." (62:38)
  - You shall decide matters of common professional interest by mutual consultation.
15. "And hold fast by the covenant of Allah all together and be not disunited." (3:102)
16. "And obey Allah ad His apostle; And fall into no disputes Lest ye lose heart and reputation." (8:40)
  - You shall strive individually and collectively to enhance the prestige of your profession by ordering your conduct in accordance with this Code of Ethics and shall not be disunited.



## CODE OF HONOUR

1. He must be loyal, faithful in his religious duties and respect the conviction of others in matters of religion.
2. He must be loyal to his country and refrain from doing anything which might lower its honour and prestige.
3. He must be truthful and honest in dealings with all people.
4. He must respect the elders and be polite to all, especially women, children, old people, the weak and helpless.
5. He must respect his teachers and others in authority in the University.
6. He must keep clean in all respects i.e. body, mind, speech, sport and habits.
7. He must help his fellow beings especially those in distress.
8. He must devote himself faithfully to his studies.
9. He must observe thrift and protect property.

### **Prohibition of Smoking and Protection of Non-Smokers Health Ordinance 2002**

The University requires adherence to the Prohibition of Smoking and Protection of Non-smokers Health Ordinance 2002. As such, smoking is strictly prohibited at all open and closed places within university premises and in university's transport.

### **Acts of Indiscipline Punishable Under University Rules**

#### **1. No Student shall:**

- i. Smoke in the class room, laboratory, workshop, library, examination hall, convocation hall and during studio work or academic functions.
- ii. 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.
- iii. 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.
- iv. 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.
- v. Stage, incite or participate in any walkout, strike or other form of agitation against the University or its teachers and officers.

#### **2. A Student Who:**

- i. Commits a breach of any of the rules of conduct specified in these regulations, or
- ii. Disobeys the lawful order of a teacher or other person in authority in the University, or
- iii. Habitually neglects his work or habitually absents himself from his classes without reasonable cause, or
- iv. Willfully damages University property or the property of a fellow student or any teacher or employee of the University; or
- v. Does not pay the fees, fines or other dues levied under the University ordinances rules and regulations, or
- vi. 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
- vii. Uses indecent language, wears immodest dress, makes indecent remarks or gestures or behaves in a disorderly manner, or
- viii. Commits any criminal, immoral, or dishonorable 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
    - i. The term of office of members of the Committee excluding ex-officio members shall be two years
    - ii. The quorum for a meeting of the Committee of Discipline shall be four members

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

## 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 for 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 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. 1,000/-	Lecturer / Resident Tutor
n)	Fine upto Rs. 2,000/-	Assistant Professor / Warden
o)	Fine upto Rs. 3,000/-	Associate Professor
p)	Fine upto Rs. 5,000/-	Chairman of Teaching Department/ Professor / Senior Warden
q)	Fine without limit	/ Director Students Affairs.
r)	Rustication from the University for a period not exceeding six months	Dean of the Faculty
s)	Rustication from the University for a period not exceeding one year	Associate Professor
t)	Rustication for any period	Chairman of a Teaching Department / Professor / Committee
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:
    - i. If he is not the Dean of the faculty he shall refer the case to the Dean who may deal with it himself or refer it to the appropriate authority.
    - ii. 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.
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 extend 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.

# UG FEE REGULATIONS

## 1. Periods of fees and Other Charges

- a) The fees and other charges are categorized as:
  - i. One-time payments at the time of admission
  - ii. Semester recurring fees
  - iii. Summer semester dues for students registering during summer semester
- b) During each year of a student's stay at the University, all recurring fees are charged in two installments payable at the beginning of Fall and Spring semesters except for the first semester wherein students can pay the charges in two installments.
- c) Registration fee at the rate of: (i) Rs 2,509/- per credit hour for subsidized category, and (ii) Rs 8,781/- per credit hour for partially subsidized category will be charged for subjects registered during the summer semester.
- d) A total of 8 semesters or 10 semesters recurring fees are admissible from students graduating from a four years degree program or a five years degree program, respectively.
- e) Students registering in subjects after completing 8 semesters or 10 semesters, respectively, from a four years degree program or a five years degree program will not be required to pay the admissible semester dues but will, however, pay Rs 2,509/- per credit hour for the subjects registered.
- f) Re-admitted students are required to pay the admissible dues, of the session they are placed with, for two extra semesters even if they complete their degree requirements with their original entry session or a semester later. They will pay Rs 2,509/- per credit hour for the subjects registered beyond the two extra semesters for which admissible dues have been paid by them.
- g) An admission retention fee of Rs 15,000/- per semester will be charged from students who have deferred their studies or who have not registered in any subject in a semester. This fee will be over and above the total fee period admissible from such students.
- a) The hostel charges are payable for the period of allotment, a part of semester being counted as full semester. Rent and electricity charges for fans are payable on per semester basis. Electricity charges for room heaters are payable only during the winter season for four months.

## 2. Revision of Tuition Fees Rates

- a) The fee and other charges schedule (for four years) published in the prospectus will be applicable to the entry session of that year only.
- b) To account for inflation, 12% increase in tuition fee and other charges may be incorporated each year.

## 3. Payment of Dues

- a) Fee challan form would be available online in the student's login on Learning Management System (LMS) before commencement of the semester.
- b) The challan form shall show the amount payable by the due date and the amount payable after the due date.
- c) Students are encouraged to pay their dues through electronic means as facilitated by HBL.
- d) Students will not be permitted to register in a semester if they do not deposit the semester dues in advance. Failing to pay the dues until the end of 21 days add/ drop period, after commencement of the semester, will result in missing the semester altogether.
- e) Admission of student defaulting in payment of their dues until the end of add/ drop period may be cancelled. Such students will have to get readmission after permission by the VC and on payment of all outstanding dues and the readmission fee.
- f) Students whose names do not appear in LMS attendance roll will not be allowed to sit in the classes by the departments.
- g) Cases of students who are externally sponsored will be dealt separately.

## 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 8<sup>th</sup> day.
- b) Half (50%) fee refund if admission cancelled from 9<sup>th</sup> to 16<sup>th</sup> day.
- c) No fee refund if admission cancelled from 17<sup>th</sup> day onward.

The count of days mentioned in the schedule for determining refund amount, would start from the date falling last from either the date of:

- (i) convening of classes; or
- (ii) 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 one-time deposit of US\$ 10,000/- made by foreign and dual national students admitted under SF category shall be refunded after deduction of months availed at the university. The one-time deposit will be divided by 48 to determine monthly refund rate. For counting availed months, a portion of a month shall be counted as one full month.
- 4.3 All other dues and fees deposited shall not be refunded including migration fee charged from migrated students.

## FINANCIAL ASSISTANCE AND SCHOLARSHIP POLICY

### 1. **Categories which are not eligible for Financial Assistance**

“A2”, “S”, and “SI” categories are not eligible to apply for financial assistance from the University.

### 2. **Financial Assistance in the form of Work and Study Model**

Following categories are eligible to apply to the Office of FA&CS for financial assistance from the University in the form of up to 50% tuition waiver through a Work and Study arrangement:

- “A1”, “I”, “N”, “L”, “Q”, “P”, “R”, “B”, “D”, “E”, “J1”, “J2” and “O”.

Decision of award will be made by the Director FA&CS on the basis of the credentials provided by the applicant. Awardees will be required to serve the University for 10 hours per week during the semesters for which the award has been given. This service may be in the form of office work, horticultural work, cleanliness work, environmental work, etc. The awardees will be attached with the offices of the Resident Officer, Project Director, Security Officer, Director Sports, Senior Warden, or another office as deemed appropriate by Director FA&CS.

### 3. **Scholarships for PTAP and Cultural Exchange Scholars**

International and Cultural Exchange students admitted under “H1” and “H4” category without financial support will be charged tuition fee of “A1” category students. The Vice-Chancellor is authorized to give a scholarship in the form of a waiver of tuition fee up to 75% to selected Pakistan Technical Assistance Program (PTAP) and Cultural Exchange scholars on the recommendation of FA&CS or In-charge Students’ Section.

### 4. **Scholarships for Disabled Students and Baluchistan Domiciled Students**

All charges categorized as fees chargeable by the University are waived for Baluchistan domiciled students and disabled students admitted under “T” category or “A1” category if they apply for the same to the office of FA&CS or In-charge Students’ Section.

### 5. **Orphan Students Admitted Under “A1” Category and FATA Domiciled Students**

- a) Needy orphan students admitted under “A1” category may apply to Director FA&CS for full tuition waiver. Decision to award tuition waiver or otherwise will be based on assessment of whether the student is needy or not.
- b) FATA domiciled students will be awarded full tuition waiver at the time of admission, if they claim to be needy with required proof as acceptable to the Office of FA&CS.

### 6. **Merit Scholarships Policy**

- a) Merit scholarships are awarded in the form of full tuition waiver to students earning top positions for one semester following the semester in which position has been earned as per the approved criteria. “A2”, “S” and “SI” categories are also eligible for the award of merit scholarship, if they so qualify.
- b) Students who have been awarded need based tuition waiver by UET are eligible for merit scholarships. However, need based tuition waiver will be discontinued for the semester in which merit scholarship is admissible.
- c) Students who have been awarded scholarships by external donors/agencies are not eligible for University merit scholarship.

### 7. **Award of Multiple Financial Assistance/ Scholarships**

- a) Students are only eligible for the award of one scholarship at a time.
- b) Orphan students admitted under “A1” category and students from Baluchistan and FATA are granted full tuition waiver by the University. However, they are permitted to avail another need-based scholarship awarded by an external agency. If the external scholarship includes tuition fee as its component, then full tuition fee will be recovered from the scholarship amount awarded to these students. However, if such an amount is not included, then tuition waiver will be maintained.
- c) Cases regarding tuition fee of orphan students availing HEC scholarship will be decided by the HEC Focal Person Office/HEC Need Based Scholarship Committee.
- d) Board of Intermediate and Secondary Education merit scholarships will be given to the awardees even if they are in receipt of a scholarship from the University.



## FEE STRUCTURE

		SUBSIDIZED	PARTIALLY SUBSIDIZED
	Eligible Categories	A1, B, D, E, J1, L, P, Q, R, SF	A2, J2, N, NM, O & S
<b>I</b>	<b>NON-RECURRING FEES (Payable at the time of admission)</b>		
1	Admission Fee payable in First Semester/ Readmission Fee	49,760	65,642
<b>II</b>	<b>SEMESTER RECURRING FEES (from 2<sup>nd</sup> to 8<sup>th</sup> or 10<sup>th</sup> semesters)</b>		
1.	Tutorial Fee	125	125
2.	Inter-University Tournament Fee	125	125
3.	Magazine Fee	188	188
4.	Medical Fee	627	627
5.	Tuition Fee (payable in every semester)	50,577	168,591
6.	Laboratory Fee	2,369	11,843
7.	Examination Fee	1,404	1,404
8.	Recreation / Sports Fee	753	753
9.	Tennis/ Squash Club Fees for Student Members only	2,509	2,509
10.	Facilities Charges	4,000 for day scholars / 2,000 for hostel residents	4,000 for day scholars / 2,000 for hostel residents
11.	Internet Charges	2,258	2,258
12.	Summer Semester Subject Registration Fee	2,509 per credit hour	8,781 per credit hour
<b>IV</b>	<b>SEMESTER HOSTEL CHARGES</b>		
1.	Room Rent (Cubicle)	4,082	8,165
2.	Room Rent (Dormitory)	2,041	4,082
3.	Fan Rent (Cubicle)	365	365
4.	Fan Rent (Dormitory)	228	228
5.	Electricity Charges (Fans) Cubicle/ Dormitory. Summer season only	1,224 / 817	1,224 / 817
6.	Electricity Charges (Lights) Cubicle/ Dormitory	2,041 / 1,634	2,041 / 1,634
7.	Sui Gas Charges	1,327	1,327
8.	Consolidated Summer Semester Charges (July & August)	10,935	10,935

### Collection of Advance Tax by Educational Institutes

As per Finance Act 2020, UET Lahore is bound to withhold advance Income Tax from non-filers of Income tax on amount of fee (inclusive of tuition and all charges) exceeding Rs 200,000/- per annum at the rate of 5% of the total amount. This tax is charged in the dues challan of Spring semester each year. Students whose guardians are residing abroad or are included in Active Tax Payers list may submit documentary evidence to get waiver from this advance tax.

**UNDERGRADUATE FEE SCHEDULE FOR SESSION 2023**  
**Applicable from 1<sup>st</sup> Semester (Fall 2023) until 8<sup>th</sup>/10<sup>th</sup> Semester (Spring 2027/28)**

	SUBSIDIZED (Rs)	PARTIALLY SUBSIDIZED (Rs)
First Semester (Fall) [1 <sup>st</sup> Installment]	49,760.00	65,642.00
First Semester (Fall) [2 <sup>nd</sup> Installment]	50,577.00	168,591.00
Second Semester (Spring)	62,427.00	189,915.00
Third Semester (Fall)	68,496.00	200,031.00
Fourth Semester (Spring)	68,496.00	200,031.00
Fifth Semester (Fall)	75,293.00	210,753.00
Sixth Semester (Spring)	75,293.00	210,753.00
Seventh Semester (Fall)	82,907.00	222,119.00
Eighth Semester (Spring)	86,907.00	226,119.00
<b>Total (8 semesters program)</b>	<b>620,156.00</b>	<b>1,693,954.00</b>
Ninth Semester (Fall)	91,433.00	234,166.00
Tenth Semester (Spring)	91,433.00	234,166.00
<b>Total (10 semesters program)</b>	<b>803,022.00</b>	<b>2,162,286.00</b>

**Hostel Fees Per Semester**

Rs. 2,509/- charged as non-refundable Hostel Security at the time of allotment.

Cubicle (Fall/Spring)	9,815 / 11,040	13,898 / 15,122
Dormitory (Fall/Spring)	7,230 / 8,047	9,271 / 10,088
Summer Semester (July & August)	10,935	10,935

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**SEAT ALLOCATION CHART FOR FACULTY OF ELECTRICAL ENGINEERING**

Category Description	Category	Electrical Lahore	Electrical Faisalabad	Electrical KSK	Electrical RCET	Electrical Narowal	Energy Systems Engg KSK	Computer Engg Lahore	CS Lahore	CS KSK	CS Faisalabad	CS RCET	CS Narowal	SE KSK	BME KSK	BME NWI	Total
Open Merit (Punjab) - Subsidized	A1	94	62	51	41	33	44	35	168	80	40	40	50	44	16	26	824
Open Merit (Punjab) - Subsidized	A1-M														15	24	39
Open Merit (Punjab) Partially subsidized	A2	39	19	15	4		4	10	35	20	10	10		4	9		179
Open Merit (Punjab) Partially subsidized	A2-M														9		9
Children of Engrs, Architects, Planners	N	2															2
Non-Muslims (Punjab)	NM	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	18
Backward Areas of Punjab	L	1															1
Children of Univ. Employees	M			Upper Limit of 10 seats in any major discipline- A total of 41 seats in all.													
Children of University Alumni	O	1															1
B.Sc. Engg. Tech or equivalent	P	4	2	2	1	1									1	1	12
Bhakkar and Layyah Districts	R	1															1
Children of Overseas Pakistanis	S	10	14	18	2	5	2							2			53
Disabled (Punjab Domiciled)	T																
Sub-total (i)		154	98	87	49	40	51	46	205	102	51	51	51	51	51	52	1139

**RESERVED SEAT ALLOCATION CHART FOR FACULTY OF ELECTRICAL ENGINEERING**

Category Description	Category	Electrical Lahore	Electrical Faisalabad	Electrical KSK	Electrical RCET	Electrical Narowal	Energy Systems Engg. KSK	Computer Engg. Lahore	CS Lahore	CS KSK	CS Faisalabad	CS RCET	CS Narowal	SE KSK	BME KSK	BME NWI	Total
Sindh	B	1															1
Baluchistan	C	1	1	1	1							1					5
KPK	D	1				1											2
Azad Kashmir	E	5	1	1	1												8
Azad Kashmir (Lepa Valley)	E	Open - Choice open to the candidate – A total of one seat in all.															
Gilgit Baltistan	E	1		1													2
Foreign (under Economics Affairs Division)	H1	20															20
Afghan Nationals	H2	Open – Upper limit of 05 seats in major disciplines in Lahore Campus – A total of 44 seats in all.															
OIC Nominees	H2																
Indian Occupied Kashmir	H3	Open – Upper limit of 03 seats in major disciplines – A total of 15 seats in all.															
Cultural Exchange (Yemen)	H4	2							4								6
Pak-Sri Lanka HECF	H5	1						1									2
Army	J	3						2									5
Air Force	J	1						1									2
Navy	J							1									1
FATA	K	4															4
DG Khan (Tribal)	Q	1															1
Rajanpur (Tribal)	Q	1															1
Baluchistan/ FATA (HEC Scholars)	U	Open – Upper limit of 04 seats in major disciplines – A total of 20 seats in all.															
HEC Self Finance	SF	10	Open - Upper Limit of 05 seats in each discipline – A total of 50 seats in all.						10	Open - Upper Limit of 05 seats in each discipline – A total of 50 seats in all.						20	
Sub-total (ii)		52	2	3	2	1	-	5	14	-	-	1	-	-	-	-	80
Sub-total (i)		154	98	87	49	40	51	46	205	102	51	51	51	51	51	52	1139
Grand Total		206	100	90	51	41	51	51	219	102	51	52	51	51	51	52	1219

**SEAT ALLOCATION CHART FOR FACULTY OF MECHANICAL ENGINEERING**

Category Description	Category	Mechanical Lahore	Mechanical KSK	Mechanical RCET	Mechanical Narowal	Mechatronics Lahore	Mechatronics Faisalabad	Automotive Engineering	IME Lahore	IME RCET	Textile Faisalabad	Total
Open Merit (Punjab) - Subsidized	A1	94	61	41	33	62	71	31	35	46	31	505
Open Merit (Punjab) Partially subsidized	A2	39	14	2		15	16	19	9	3	17	134
Children of Engrs, Architects, Planners	N	2										2
Non-Muslims (Punjab)	NM	2	1	1	1	1	1	1	1	1	1	11
Backward Areas of Punjab	L	1										1
Children of Univ. Employees	M	Upper Limit of 10 seats in any major discipline- A total of 41 seats in all.										
Children of University Alumni	O	1										1
B.Sc. Engg. Tech or equivalent	P	4	2	1	1				1	1	1	11
Bhakkar and Layyah Districts	R											
Children of Overseas Pakistanis	S	15	14	2	6	2	11		3			53
Disabled (Punjab Domiciled)	T											
Sub-total (i)		158	92	47	41	80	99	51	49	51	50	718

**RESERVED SEAT ALLOCATION CHART FOR FACULTY OF MECHANICAL ENGINEERING**

Category Description	Category	Mechanical Lahore	Mechanical KSK	Mechanical RCET	Mechanical Narowal	Mechatronics Lahore	Mechatronics Faisalabad	Automotive Engineering	IME Lahore	IME RCET	Textile Faisalabad	Total
Sindh	B	1										1
Baluchistan	C	1		1						1		3
KPK	D	1										1
Azad Kashmir	E	5	1	1								7
Azad Kashmir (Lepa Valley)	E	Open - Choice open to the candidate – A total of one seat in all.										
Gilgit Baltistan	E	1		1		1	1					4
Foreign (under Economics Affairs Division)	H1	12										12
Afghan Nationals	H2	Open – Upper limit of 05 seats in major disciplines in Lahore Campus – A total of 44 seats in all.										
OIC Nominees	H2	1										1
Indian Occupied Kashmir	H3	Open – Upper limit of 03 seats in major disciplines – A total of 15 seats in all.										
Cultural Exchange (Yemen)	H4	2										2
Pak-Sri Lanka HECF	H5	1										1
Army	J	3										3
Air Force	J											
Navy	J	1										1
FATA	K	4		2			2		2		2	12
DG Khan (Tribal Area)	Q		1									1
Rajanpur (Tribal Area)	Q			1								1
Baluchistan/ FATA (HEC Scholars)	U	Open – Upper limit of 04 seats in major disciplines – A total of 20 seats in all.										
HEC Self Finance	SF	10	Open - Upper Limit of 05 seats in each discipline – A total of 50 seats in all.									10
Sub-total (ii)		43	2	6		1	3	0	2	1	2	60
Sub-total (i)		158	92	47	41	80	99	51	49	51	50	718
Grand Total		201	94	53	41	81	102	51	51	52	52	778



## SEAT ALLOCATION CHART FOR FACULTY OF CIVIL ENGINEERING, FACULTY OF CHEMICAL, METALLURGICAL AND MATERIAL ENGINEERING AND FACULTY OF EARTH SCIENCES AND ENGINEERING

Category Description	Category	Civil Lahore	Civil Narowal	Architectural Engg. Lahore	Transportation Engg. Lahore	Environmental Engg. Lahore	Environmental Science Lahore	Chemical Lahore	Chemical Faisalabad	Chemical KSK	Food Science & Technology KSK	Polymer Engg. Lahore	Metallurgical and Materials Engg. Lahore	Petroleum Engg. Lahore	Mining Engg. Lahore	Geological Engineering	Total
Open Merit (Punjab) - Subsidized	A1	94	27	23	26	38	23	52	20	61	25	31	31	20	31	35	537
Open Merit (Punjab) - Subsidized	A1-M						21				25						46
Open Merit – Partially subsidized	A2	33		11	11	10	2	14	11	29		6	8	9	5	7	156
Open Merit (Punjab) Partially subsidized	A2-M						2										2
Children of Engrs, Architects, Planners	N	2						1					1	1	1		6
Non-Muslims (Punjab)	NM	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
Backward Areas of Punjab	L																
Children of Univ. Employees	M		Upper Limit of 10 seats in any major discipline- A total of 41 seats in all.														
Children of University Alumni	O																
B.Sc. Engg Tech or equivalent	P	4	1					2	1	1							9
Bhakkar and Layyah Districts	R																
Children of Overseas Pakistanis	S	15	10	5	2	2	2	10	4	4		2	1	3		1	61
Disabled (Punjab Domiciled)	T																
Sub-total (i)		150	39	40	40	51	51	80	37	96	51	40	42	34	38	44	833

## RESERVED SEAT ALLOCATION CHART FOR FACULTY CIVIL ENGINEERING, FACULTY OF CHEMICAL, METALLURGICAL AND MATERIAL ENGINEERING AND FACULTY OF EARTH SCIENCES AND ENGINEERING

Category Description	Category	Civil Lahore	Civil Narowal	Architectural Engg Lahore	Transportation Engg Lahore	Environmental Engg Lahore	Chemical Lahore	Chemical Faisalabad	Chemical KSK	BS Food Science & Technology KSK	Polymer Engg Lahore	Metallurgical and Materials Engg Lahore	Petroleum Engg Lahore	Mining Engg Lahore	Geological Engg Lahore	Total
Sindh	B	1					2						2	1	1	7
Baluchistan	C	3		1	1		1	1				1	3	2	1	14
KPK	D	1	1	1			2					2	1	1	2	11
Azad Kashmir	E	5		1			2	2						2	2	14
Azad Kashmir (Lepa Valley)	E	Open - Choice open to the candidate – A total of one seat in all.														
Gilgit Baltistan	E		1								1			1		3
Foreign (under Economics Affairs Division)	H1	21		3			4					3	3			34
Afghan Nationals	H2	Open – Upper limit of 05 seats in major disciplines in Lahore Campus – A total of 44 seats in all.														
OIC Nominees	H2	1												1		2
Indian Occupied Kashmir	H3	Open – Upper limit of 03 seats in major disciplines – A total of 15 seats in all.														
Cultural Exchange (Yemen)	H4	1											1			2
Pak-Sri Lanka HECP	H5	1					1									2
Army	J	2														2
Air Force	J															
Navy	J															
FATA	K	8					2		2						2	14
DG Khan (Tribal)	Q	1											1			2
Rajanpur (Tribal)	Q							1								1
Baluchistan/ FATA (HEC Scholars)	U	Open – Upper limit of 04 seats in major disciplines – A total of 20 seats in all.														
HEC Self Finance	SF	10	Open - Upper Limit of 05 seats in each discipline – A total of 50 seats in all.													10
Sub-total (ii)		55	2	6	1		14	4	2	-	1	6	11	8	8	118
Sub-total (i)		150	39	40	40	51	80	37	96	51	40	42	34	38	43	781
Grand Total		205	41	46	41	51	94	41	98	51	41	48	45	46	51	899

## SEAT ALLOCATION CHART FOR FACULTY OF ARCHITECTURE AND PLANNING & FACULTY OF NATURAL SCIENCES, HUMANITIES AND ISLAMIC STUDIES

Category Description	Category	Architecture Lahore	Product & Industrial Design Lahore	City and Regional Planning Lahore	Chemistry Lahore	Chemistry KSK	Chemistry FSD	Mathematics Lahore	Mathematics KSK	Mathematics Faisalabad	Mathematics Narowal	Mathematics RCET	Physics Lahore	Physics KSK	Physics Narowal	BBA Lahore	BBA KSK	BBA FSD	BBA Narowal	BBA RCET	BBA Lahore	Environmental Science KSK	Environmental Science FSD	Total	
Open Merit (Punjab) - Subsidized	A1	26	37	25	21	22	23	41	44	47	49	49	21	22	24	150	100	100	100	100	100	23	23	1147	
Open Merit (Punjab) – Subsidized	A1-M				20	22	22						20	22	25							21	21	173	
Open Merit (Punjab) Partially subsidized	A2	14	13	8	2	2	2	4	4	2			2	2								2	2	59	
Open Merit (Punjab) Partially subsidized	A2-M				2	2	2						2	2								2	2	14	
Children of Engrs, Architects, Planners	N	1		1																				2	
Non-Muslims (Punjab)	NM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	2	2	2	2	1	1	29
Backward Areas of Punjab	L																								
Children of Univ. Employees	M	Upper Limit of 10 seats in any major discipline- A total of 41 seats in all.																							
Children of University Alumni	O																								
B.Tech(P)	P																								
Bhakkar and Layyah Districts	R																								
Children of Overseas Pakistanis	S	5	2		5	2	1	5	2	1	1	1	5	2	1							2	2	37	
Disabled (Punjab Domiciled)	T	1		1																				2	
Sub-total (i)		48	53	36	51	51	51	51	51	51	51	51	51	51	51	153	102	102	102	102	102	51	51	1463	

## RESERVED SEAT ALLOCATION CHART FOR FACULTY OF ARCHITECTURE AND PLANNING & FACULTY OF NATURAL SCIENCES, HUMANITIES AND ISLAMIC STUDIES

Category Description	Category	Architecture Lahore	Product & Industrial Design Lahore	City and Regional Planning Lahore	Chemistry Lahore	Chemistry KSK	Chemistry FSD	Mathematics Lahore	Mathematics KSK	Mathematics FSD	Mathematics Narrowal	Mathematics RCET	Physics Lahore	Physics KSK	Physics Narrowal	BBA Lahore	BBA KSK	BBA Faisalabad	BBA Narrowal	BBA RCET	BBIIT Lahore	Environmental Science KSK	Environmental Science FSD	Total	
Sindh	B			1																				1	
Baluchistan	C	1		1																				2	
KPK	D			5																				5	
Azad Kashmir	E			2																				2	
Azad Kashmir (Lepa Valley)	E	Open - Choice open to the candidate – A total of one seat in all.																							
Gilgit Baltistan	E			1																				1	
Foreign (under Economics Affairs Division)	H1	2		3																				5	
Afghan Nationals	H2	Open – Upper limit of 05 seats in major disciplines in Lahore Campus – A total of 44 seats in all.																							
OIC Nominees	H2																								
Indian Occupied Kashmir	H3	Open – Upper limit of 03 seats in major disciplines – A total of 15 seats in all.																							
Cultural Exchange (Yemen)	H4																								
Army	J																								
Air Force	J																								
Navy	J																								
FATA	K																								
DG Khan (Tribal Area)	Q																								
Rajanpur (Tribal Area)	Q																								
Baluchistan/ FATA (HEC Scholars)	U																								
HEC Self Finance	SF	Open - Upper Limit of 05 seats in each discipline – A total of 50 seats in all.																							
Sub-total (ii)		3	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	
Sub-total (i)		48	53	36	51	51	51	51	51	51	51	51	51	51	51	153	102	102	102	102	102	102	51	51	1463
Grand Total		51	53	49	51	51	51	51	51	51	51	51	51	51	51	153	102	102	102	102	102	102	51	51	1479

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**Convener Admission Committee**  
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