



# FOREWORD

NED University of Engineering & Technology is one of the oldest engineering universities of Pakistan with its impact and reputation completing hundred years in 2021. In its centennial year, the University has maintained its prominence in the Times Impact Ranking which evaluates academic institute against the Sustainable Development Goals. Correspondingly, in the renowned and reliable QS Ranking, NED University is among the top 2.5 percent institutions in Asia. Our alumni are placed across the globe and have been contributing in various professional capacities in almost every sector making a difference to engineering, technology, economy and ultimately society and humanity at large. The success stories and global presence of our alumni reflect the quality of graduates being educated and trained at this prestigious institution. The University with its strong academia-industry linkage enhances student learning through industry-exposure opportunities and industry engagement on demand-based research for the industry. State-of-the-art laboratories established in various departments in collaboration with the partner industries and the NED Alumni with the recent ones including National Centre for AI, Cyber Security, Robotics, Data Analysis, Virtual Reality Centre and Centre for Infectious Disease Modelling are actively engaged in doing research on pressing, emerging and critical problems.

The newly founded constituent college of the University; Thar Institute of Engineering, Sciences and Technology (TIEST) at Islamkot, Thar has completed its one year of establishment. The students admitted at TIEST are fully facilitated with modern and state-of-the-art academic and relevant equipment aligned with the University's commitment to provide its students, applied, analytical, design, and computing skills that underpin modern engineering practices, while encouraging their creativity and problem-solving skills essential for contemporary engineers and professionals in allied disciplines. Learning one foreign language (either Chinese or German or French or Arabic) have been made compulsory for all students to make them integrate and contribute better in their future industrial, organizational and social contexts.

Our endeavours are to make our students useful to the society in particular and to humanity in general. In dealing with industry and utilities, attempts are made to maintain standards of integrity as well as quality. Consequently, our students are nurtured to attain high level of leadership skills. The NED experience not only transforms them to become technically strong, but also makes them ethically sound. The NED educational routines also emphasize multidisciplinary activities in education, service and research. Entrepreneurship skills are also inculcated in our students for aligning them to become successfully self-employed and directly contributing towards the economy of the Country. We maintain a friendly, supportive and diverse environment that encourages our faculty and students to achieve their best, which is aptly provided in the quality policy which is strictly adhered to.

This prospectus furnishes necessary information to all the aspirants who wish to seek admission at undergraduate programmes in various engineering and allied disciplines. The University provides a pure merit-based admission process after successful appearance in the admission test.

We wish all the aspirants good luck in their future endeavours.

**Dr. Sarosh Hashmat Lodi**  
**Vice-Chancellor**



<b>1. General Information</b>			
1.1 Historical Background of The University	2		
1.2 Thar Institute of Engineering, Sciences and Technology (TIEST)	3		
1.3 Administration & Academic Support	4		
<b>2. Academic Programmes</b>			
2.1 The Faculties	8		
2.1.1 Faculty of Civil and Petroleum Engineering	8		
2.1.2 Faculty of Mechanical & Manufacturing Engineering	8		
2.1.3 Faculty of Electrical & Computer Engineering	8		
2.1.4 Faculty of Chemical and Process Engineering	8		
2.1.5 Faculty of Information Sciences & Humanities	8		
2.1.6 Faculty of Architecture & Management Sciences	8		
2.1.7 Thar Institute of Engineering, Sciences and Technology (TIEST)	8		
2.2 Teaching Departments	9		
2.2.1 Department of Civil Engineering (also Administering Bachelor of Engineering Civil with Specialization in Construction Engineering Programme)	9		
2.2.2 Department of Urban & Infrastructure Engineering	10		
2.2.3 Department of Petroleum Engineering	11		
2.2.4 Department of Earthquake Engineering	11		
2.2.5 Department of Mechanical Engineering	11		
2.2.6 Department of Textile Engineering (also Administering Bachelor of Science in Textile Sciences Programme)	13		
2.2.7 Department of Industrial & Manufacturing Engineering	13		
2.2.8 Department of Automotive and Marine Engineering	14		
2.2.9 Department of Electrical Engineering	15		
2.2.10 Department of Computer & Information Systems Engineering	16		
2.2.11 Department of Electronic Engineering (also Administering Bachelor of Engineering in Telecommunications Programme)	17		
2.2.12 Department of Biomedical Engineering	18		
2.2.13 Department of Materials Engineering	19		
2.2.14 Department of Chemical Engineering	20		
2.2.15 Department of Metallurgical Engineering	20		
2.2.16 Department of Polymer & Petrochemical Engineering	21		
2.2.17 Department of Food Engineering	21		
2.2.18 Department of Environmental Engineering	22		
2.2.19 Department of Software Engineering	22		
2.2.20 Department of Computer Science & Information Technology	23		
2.2.21 Department of Mathematics (Administering Bachelor of Science in Computational Finance Programme)	23		
2.2.22 Department of Physics (Administering Bachelor of Science in Applied Physics Programme)	24		
2.2.23 Department of Chemistry (Administering Bachelor of Science in Industrial Chemistry Programme)	25		
2.2.24 Department of Humanities (Administering Bachelor of Science in English Linguistics Programme)	25		
2.2.25 Department of Architecture and Planning (Administering Bachelor of Science in Development Studies Programme)	26		
2.2.26 Department of Economics & Management Sciences (Administering Bachelor of Science in Economics & Finance and also Administering Bachelor of Science in Management Sciences Programmes)	27		
2.2.27 Thar Institute of Engineering, Sciences and Technology (TIEST)	27		
<b>3. Courses of Studies</b>			
3.1 Bachelor of Engineering Programmes	30		
3.1.1 Civil Engineering	30		
3.1.2 Urban Engineering	32		
3.1.3 Petroleum Engineering	33		
3.1.4 Civil Engineering (Specialization in Construction)	34		
3.1.5 Mechanical Engineering	35		
3.1.6 Textile Engineering	36		
3.1.7 Industrial & Manufacturing Engineering	37		
3.1.8 Automotive Engineering	38		
3.1.9 Electrical Engineering	39		
3.1.10 Computer Systems Engineering	40		
3.1.11 Electronic Engineering	41		
3.1.12 Telecommunications Engineering	42		
3.1.13 Materials Engineering	43		
3.1.14 Chemical Engineering	44		
3.1.15 Metallurgical Engineering	45		
3.1.16 Polymer & Petrochemical Engineering	46		
3.1.17 Software Engineering	47		
3.1.18 Biomedical Engineering	48		
3.1.19 Food Engineering	49		
3.2 Bachelor of Science Programmes	50		
3.2.1 Development Studies	50		
3.2.2 Management Sciences	51		
3.2.3 Textile Sciences	52		
3.2.4 Computer Science	53		
3.2.5 Computational Finance	54		
3.2.6 Applied Physics	55		
3.2.7 Industrial Chemistry	56		
3.2.8 English Linguistics	57		
3.2.9 Economics & Finance	58		
3.3 Bachelor of Architecture	59		



<b>4. Mode of Application for Admission</b>	
4.1 General Guidance	62
4.2 Eligibility Conditions	62
4.3 Equivalence of Foreign Examinations	63
4.4 Determination of Merit Position	63
4.5 Marks for Hafiz-e-Qur'an	64
4.6 Rejection of Application	64
4.7 Display of Merit List	64
<b>5. Admission Categories</b>	
5.1 Regular Scheme	66
(i) Seats Distribution	66
(ii) Description of Categories	69
(iii) Transfer of Seats	71
5.2 Self Finance Scheme	72
(i) Seats Distribution	72
(ii) Description of Categories	74
(iii) Admission Under More Than One Categories	75
(iv) Transfer of Seats	75
<b>6. Mode of Admission</b>	
6.1 Admission in First Semester	78
6.1.1. Reporting in Person	78
6.1.2 Documents Required	78
6.1.3 Medical Fitness Test	78
6.1.4 Medical Fitness	78
6.1.5 Interview & Admission	79
6.1.6 University Identity Card	79
6.2 Employment / Simultaneous Enrolment	79
6.3 Cancellation / Withdrawal of Admission	79
6.4 Medium of Instructions	79
6.5 Admissions in Subsequent Semesters / Years of Study	79
6.6 Admission on Migration Basis	80
6.7 Duration of Programme	80
6.8 Cancellation of Admission / Enrolment	80
6.9 Withdrawal from Semester / Programme	81
6.10 Grade Improvement	81
<b>7. Examinations</b>	
7.1 Semester Examination	84
7.2 Class Attendance	84
7.3 Admit Card	84
7.4 Grade Points	84
7.5 Grade Point Averages	84
7.6 Marks Distribution	84
7.7 Award of Degree	84
<b>8. Fee Structure</b>	
8.1 Fee and Charges	86
8.2 Charges Under Self-Finance Scheme	86
8.3 Security Deposit	86
8.4 Miscellaneous Fee	86
8.5 Hostel Charges	86
8.6 Other Expenses	86
<b>9. Scholarships, Stipends &amp; Awards</b>	
9.1 Assistance Scholarship	88
9.2 Other Scholarships	88
9.3 Merit Gold Medals & Certificates	88
<b>10. Supporting Infrastructure &amp; Students Facilities</b>	
10.1 Engr. Abul Kalam Library	90
10.2 Information Technology (IT) Department	90
10.2.1 Network & Hardware (Internet Facility)	90
10.2.2 Hardware Maintenance and Inventory	91
10.2.3 Video Conferencing Facility	91
10.2.4 Information Systems and Software Section	91
10.3 Instrumentation Centre	91
10.4 NED Academy	92
10.4.1. Centre of Continuing Engineering Education (CCEE)	93
10.4.2. Centre of Professional Excellence - CoPE	93
10.5 Cowasjee Earthquake Study Centre	93
10.6 Shake Table Testing Facility	94
10.7 Advanced Material Testing Facility	94
10.8 PCB Fabrication Laboratory	94
10.9 Product Development Centre	94
10.10 Directorate of Industrial Liaison	94
10.11 Office of Research, Innovation and Commercialization (ORIC)	95
10.11.1 Objectives:	95
10.11.2 Initiatives and Activities	95
10.11.3 Organizational Support	95
10.11.4 Lab Commercialization	95
10.11.5 Entrepreneurship Development	95
10.11.6 Workshops & Training	96
10.11.7 Industry Linkages	96
10.11.8 Business & Technology Incubation	96
10.11.9 Campus Companies	96
10.11.10 Maker Studio	96
10.11.11 Research Internship Program:	96
10.12 Directorate of University Advancement & Financial Assistance	97
10.13 Medical Department	97
10.14 Student Affairs Department	97
10.15 Other Students Facilities	97
10.15.1 Duty Society	97
10.15.2 Plain Paper Copiers	97
10.15.3 Stationary Shop	97
10.15.4 Sports Facilities	97
10.15.5 Hostel Facilities	98
10.15.6 Boys' Common Room	98
10.15.7 Girls' Common Room	98
10.15.8 Transport	98
<b>11. Students' Activities</b>	
11.1 Students' Societies	100
11.2 Student Chapters of Professional Bodies	100
<b>12. Discipline</b>	
12.1 General Rules	102
12.2 Appeal Against Cancellation of Admission	102
12.3 Leave of Absence	102



## **VISION**

*“Be a leader in enabling Pakistan's social and economic transformation.”*

## **MISSION**

*“Acquire education and research excellence in engineering and allied disciplines to produce leadership and enabling application of knowledge and skills for the benefit of the society with integrity and wisdom.”*

## **QUALITY POLICY**

*NED University of Engineering and Technology believes in establishing environment conducive to continual improvement in its efforts for providing the highest level of quality education.*

*This University is making all out efforts to raise its standards through teaching excellence and quality research. These efforts are carried out with involvement of the entire University work force - to obtain utmost possible satisfaction of its customers.*

*Our endeavours are to make our students useful to society in particular and to humanity in general. In dealings with industry and utilities, attempts are made to maintain standards of integrity as well as quality.*





## **QUALITY ASSURANCE**

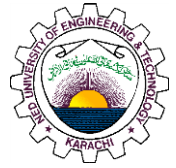
*Quality Enhancement Cell, QEC (previously known as Quality Management Cell) was established at NED University in 1999 with the aim to develop and implement Quality Management System in the University. The cell successfully acquired ISO 9000 certification in the year 2002. Since then, the QEC has been instrumental in assuring quality to its customers, stakeholders, and has successfully transformed the QMS standards to ISO 9001:2015. With the advent of QAA in recent years, QEC NED has coordinated with HEC with the spirit of continual improvement. In pursuance of QAA-HEC instructions, NED University has successfully established the QECs in all affiliated colleges/ institutes of the University.*

*Quality Assurance Agency (QAA) of the HEC assesses the progress of the Quality Enhancement Cells (QECs) of all Universities through a quantitative 'Scorecard System' based upon their performance and participation in quality-related processes. During the reporting period, QEC-NED has been assigned a score of 95.67% with a placement in 'W' Category.*

*Main responsibilities of QEC office are;*

- *Conducting faculty/employee development through trainings*
- *Correspondence with HEC and other agencies for QEC/University Ranking*
- *Self-Assessment of academic programmes*
- *Quality Assurance in affiliated colleges*
- *Processing HEC NOC for academic all programmes*
- *Masters/PhD Programme Review*
- *Institutional Performance Evaluation (IPE)*
- *New Coverage of events*
- *Internal Quality Audits (IQAs)*
- *Surveillance Audits*
- *Board of Review (University Level/Department Level) Meetings*
- *University Level KPIs*
- *Yearly Quality Objective*
- *Developing and improving Quality Standard Procedures (QSP) and Standard Opening Procedures (SOPs)*
- *Acquiring and analyzing stakeholders' feedback*
- *Customer Complaint Management*





# CHAPTER 1

## *General Information*



## **1.1 HISTORICAL BACKGROUND OF THE UNIVERSITY**

The NED University of Engineering & Technology, was established in March 1977 under an Act of the Provincial Assembly of Sindh after upgrading of the former NED Government Engineering College, which was set up in 1921. The NED University is thus one of the oldest institutions in Pakistan for teaching and producing Engineering graduates. Prior to this, the D.J. Science College, used to run classes to train subordinates for the Sindh P.W.D., the Municipalities and Local Boards.

On August 29, 1921 College Principal C.S Shahani made a concerted effort to get Engineering Degree classes started to meet demands of Civil Engineers on the project for completion of the Sukkur Barrage. Application to this effect was made to the University of Bombay through the Commissioner of Sindh, who was ex-officio president of Sindh Collegiate Association (a registered society of subscribers for providing higher education in Sindh). The Bombay University, however, rejected the application on the grounds of insufficient finances and insisted on entirely separate buildings, laboratories for the engineering college as a separate institution. After collection of donations from the Puribai and Becharbai Trust, Vishandas Fatehchand Brothers and one huge donation (for that time) of Rs.150,000 from the heirs of Mr. Nadirshaw Edulji Dinshaw, the new college buildings and laboratories were constructed on a separate land. The new college was originally the Prince of Wales Engineering College but later renamed in memory of Nadirshaw Edulji Dinshaw. The NED College was provisionally granted affiliation on 23-05-1923 by the University of Bombay for the First and Second Year courses in Civil Engineering and 78 students were provisionally admitted into first year classes in 1922. Permanent affiliation followed in February 1927.

The first-full time Principal of NED Engineering College was Mr. G.N.Gokhale who joined on 1<sup>st</sup> July 1923. Prior to this, Rai Sahib Bhupatrai had acted as Honorary Principal. The first professor (and Vice Principal) was Mr. S.B. Jannarkar who, along with Mr. Gokhale, did all the spadework in organizing and equipping the various departments and ordering the equipment for the Power House, Boiler Room, Hydraulics Laboratory, Engine Room and Machine Shops.

The original NED Engineering College was housed in four blocks of buildings and two sheds. The main block was named as Seth Fatehchand Dewandas Khilnani Hall. The block housing the Power House, Electrical and Hydraulics Laboratories, and Workshops was named after Bai Puribai and Bacharbai. Further additions were made to this block to provide accommodation for the Machine Shop on the ground floor and a (Mechanical) Drawing Hall on the first floor. The fourth block, completed in 1945, contained a Classroom and Clerk's Office on the ground floor and another (Civil) Drawing Hall on the first floor.

Two sheds were also built, one to house the Carpentry and Smithy Shops, and the other, alongside the Electrical Laboratory and Engine Room, to train technicians. The total cost of the buildings was just over Rs. 265,000 and the cost of equipment (including machinery, electrical instruments; models, steam, gas and oil engines; surveying and leveling instruments), books and furniture was just under Rs. 400,000.







The college remained affiliated to the University of Bombay from its inception in 1922 to 1947, after which it was taken over by the Government of Sindh; renamed as NED Government Engineering College and affiliated to the University of Sindh. After establishment of the University of Karachi in 1951, the affiliation of the College was transferred to this University. In 1964, a comprehensive plan was prepared to shift the college from its location in the congested downtown area (where no expansion was possible) to a new site adjoining the University of Karachi. The project was carried out with the assistance of the World Bank which provided Rs.118 millions in two phases and the College was shifted to its new 40 hectares Main Campus in 1975.

On the 1<sup>st</sup> of March, 1977 the NED Government Engineering College became the NED University of Engineering and Technology. From an enrolment of 50 students in 1923, the student population, at undergraduate, graduate and Ph.D. levels, has now gone up to nearly 13881. The Departments of Biomedical Engineering and Food Engineering are located at NED LEJ Campus for which the land and building - estimated value Rs. 350 million - was donated by (Late) Latif Ebrahim Jamal, a well-known philanthropist.

The first Vice Chancellor of the University was Mr. A. M. Akhoond who was succeeded in sequential order by Prof. Dr. A. T. Khan, Prof. Dr. Jameel Ahmed Khan, Prof. Dr. M. Munir Hasan, Prof. Dr. A. Q. Qazi Engr. Abul Kalam and Prof. Dr. M. Afzal Haque, Dr. S. H. Lodi is the present Vice Chancellor.

## **1.2 Thar Institute of Engineering, Sciences and Technology (TIEST)**

TIEST is established at Mithi, Tharparkar which is around 350 km towards East from Karachi. The main purpose of establishing this institute was to provide direct access of quality education to the deprived students of this district as well as producing qualified workforce for the future need of this rapidly developing area of the Province.

TIEST is currently established in a temporary building which will eventually be shifted to its main campus which is going to be established at a land of around 300 acres on the main road leading to Islamkot and is almost in the mid of Mithi and Islamkot. It is also at reasonable distance from the Airport. At TIEST currently bachelor of Computer Science programme is offered with 60 seats. First Principal of TIEST is Prof. Dr. Muhammad Raza Mehdi.





### **1.3 Administration & Academic Support**

#### **Vice-Chancellor**

**Dr. S. H. Lodi**

*B.E. (Civil) NED; M.S. Oregon State University, USA;  
Ph.D. Heriot-Watt University, (UK)*

#### **Pro Vice-Chancellor**

**Prof. Dr. Muhammad Tufail**

*B.E. (Mech) NED;  
M.Sc. (Manufacturing System) Nottingham University, UK;  
Ph.D. Nottingham University, UK; C.Eng; FIMechE, Mem ASME*

#### **Dean Faculty of Civil and Petroleum Engineering, Dean (CPL)**

**Prof. Dr. Asad-Ur-Rehman Khan**

*B.E. (Civil) NED; M.S. (Civil) KFUPM, Saudi Arabia;  
Ph.D. (Civil) KFUPM, Saudi Arabia.*

#### **Dean Faculty of Mechanical & Manufacturing Engineering, Dean (MME)**

**Prof. Dr. Syed Amir Iqbal**

*B.E. (Mech); M.E.(Mech.) with  
Mfg. Engg. Specialization; Ph.D. (UK)*

#### **Dean Faculty of Electrical & Computer Engineering, Dean (ECE)**

**Prof. Dr. Saad Ahmed Qazi**

*B.E. (Electrical) NED UET; M.Sc. (DSP) UK;  
Ph.D. (UK), MIEE (UK); MIEEE (USA)*

#### **Dean Faculty of Chemical & Process Engineering, Dean (CPE)**

**Prof. Dr. Asif Ahmed Shaikh**

*B.E. (Civil) NED Uni; M. Engg. (Civil) Nagasaki Uni, Japan;  
Ph.D. (Civil/Environmental Engg); Nagasaki Uni, Japan.*

#### **Dean Faculty of Information, Sciences & Humanities, Dean (ISH) (Acting)**

**Prof. Dr. Noman Ahmed**

*B.Arch; M.C.P.; (METU, Turkey);  
Ph.D. (UK); MPCATP*

#### **Dean Faculty of Architecture & Management Sciences, Dean (AMS)**

**Prof. Dr. Noman Ahmed**

*B.Arch; M.C.P.; (METU, Turkey);  
Ph.D. (UK); MPCATP*

#### **Principal, Thar Institute of Engineering, Sciences and Technology (TIEST)**

**Prof. Dr. Muhammad Raza Mehdi**

*B.E. (Civil) NED; M.S. (Transportation);  
Ph.D. (Environmental Science)*



<b>Registrar (Acting)</b>
<b>Mr. Ghazanffar Hussain</b> <i>M.Phil / PhD in progress (UoK); M.Sc. (Physical Chemistry) (UoK) (Gold Medal)</i>
<b>Additional Registrar (Academic)</b>
<b>Syed Imtiaz Ahmed</b> <i>M.B.A.; M.A. (Eco); M.A. (Islamic Studies);</i>
<b>Deputy Registrar (Academic-I) (Acting)</b>
<b>Mr. Irfan Ali</b> <i>M.A. (Economics)</i>
<b>Deputy Registrar (Academic-II)</b>
<b>Syed Muhammad Tarique</b> <i>M.A. (Economics)</i>
<b>Deputy Registrar (Security &amp; General) / Coordination</b>
<b>Mr. Makhdoom Khalid Hashmi</b> <i>M.A. (Economics)</i>
<b>Controller of Examinations (Acting)</b>
<b>Mr. Safi Ahmed Zakai</b> <i>B.E (Elect.) [NED]; MBA (Marketing) IBA Karachi; M.Engg (Telecom.) NED; M.Phil (Management) UoK</i>
<b>Director of Finance</b>
<b>Mr. Muhammad Sajeeruddin</b> <i>B.Com KU; L.L.B. KU; A.C.M.A. (Accounts) ICMAP; F.C.M.A. (Accounts) ICMAP.</i>
<b>Resident Auditor (Acting)</b>
<b>Mr. S. M. Hassan Shamsie</b> <i>B.Com KU; M.A. (Economics) KU</i>
<b>Director (Planning &amp; Projects) (Acting)</b>
<b>Engr. Ashfaq Ahmed Khan</b> <i>B.Sc., B.Sc. Engg. (Civil) Member S.A.M.E. (U.S.A.); P.E</i>
<b>Chief Librarian (Acting)</b>
<b>Ms. Huma Sardar</b> <i>B.Sc. (Microbiology) UoK; B.L.I.S. (Library and Info. Science) UoK; M.L.I.S. (Special Libraries) UoK</i>

<b>Director, QEC (Acting)</b>
<b>Prof. Dr. Asif Ahmed Shaikh</b> <i>B.E. (Civil) NED Uni; M. Engg. (Civil) Nagasaki Uni, Japan; Ph.D. (Civil/Environmental Engg); Nagasaki Uni, Japan.</i>
<b>Director of Works &amp; Services and Provost</b>
<b>Engr. S. Wasi Uddin</b> <i>B.E. (Civil); M.Engg.(Env.)</i>
<b>Controller Student Affairs (Acting)</b>
<b>Dr. Ali Hasan Mahmood</b> <i>B. E. (Textile Engg); M. Engg (Textile); Ph.D. (Textile, The University of Manchester, UK)</i>
<b>Director Procurement</b>
<b>Mr. Abdul Wahab</b> <i>M.B.A. (Finance and Accounting)</i>
<b>Director Industrial Liaison (Acting)</b>
<b>Dr. Muhammad Amir Qureshi</b> <i>B.E. (Textile Engg.) [NED]; M.Engg. (Textile Engg.) [NED]; Ph.D. (Heriot-Watt Uni) [UK]</i>
<b>Director, Information Technology Department (Acting)</b>
<b>Dr. Muhammad Asad Arfeen</b> <i>B.E (Comp. &amp; Info. Sys.); M. Engg (Comp. Sys); Ph.D. (Teletraffic Engineering) New Zealand</i>
<b>Director General, NED Academy (Acting)</b>
<b>Prof. Dr. Rizwan-ul-Haque Farooqui</b> <i>B.E(Civil) NED; M.S. (Civil) National Uni. of Singapore; Ph.D. (Civil) Florida International University, USA</i>
<b>Director, Office of Research, Innovation &amp; Commercialization (ORIC) (Acting)</b>
<b>Dr. Syed Mehmood Hasan</b> <i>M.Sc. Engg. Management (SCM) Uni. of Greenwich, UK; Ph.D. (Integration of SCM) Uni. of Greenwich, UK;</i>
<b>Principal Medical Officer, Medical Department</b>
<b>Dr. Mariam Alam</b> <i>M.B.B.S (Baqai Medical University)</i>
<b>Technical Assistant to the Vice Chancellor</b>
<b>Engr. Danish Ur Rehman Khan</b> <i>B.E. (Computer Systems) NED; M. Engg. (Electrical) NED; M.Engg. (Computer Networks &amp; Performance Evaluation) NED; Ph.D. (In Progress) NED</i>









## CHAPTER 2

# *Academic Programmes and Departments*



## **2.1 THE FACULTIES**

The teaching departments under various Faculties are listed below:

<p><b>2.1.1 Faculty of Civil and Petroleum Engineering</b></p> <ul style="list-style-type: none"> <li>i) Civil Engineering (Also Administering Bachelor of Engineering in Civil with Specialization in Construction Engineering Programme)</li> <li>ii) Urban &amp; Infrastructure Engineering</li> <li>iii) Petroleum Engineering</li> <li>iv) Earthquake Engineering</li> </ul> <p><b>2.1.2 Faculty of Mechanical &amp; Manufacturing Engineering</b></p> <ul style="list-style-type: none"> <li>i) Mechanical Engineering</li> <li>ii) Textile Engineering (Also Administering Bachelor of Science in Textile Sciences Programme)</li> <li>iii) Industrial &amp; Manufacturing Engineering</li> <li>iv) Automotive &amp; Marine Engineering</li> </ul> <p><b>2.1.3 Faculty of Electrical &amp; Computer Engineering</b></p> <ul style="list-style-type: none"> <li>i) Electrical Engineering</li> <li>ii) Computer &amp; Information Systems Engineering</li> <li>iii) Electronic Engineering (Also Administering Bachelor of Engineering in Telecommunications Programme)</li> <li>iv) Biomedical Engineering</li> </ul> <p><b>2.1.4 Faculty of Chemical &amp; Process Engineering</b></p> <ul style="list-style-type: none"> <li>i) Materials Engineering</li> <li>ii) Chemical Engineering</li> <li>iii) Metallurgical Engineering</li> <li>iv) Polymer &amp; Petrochemical Engineering</li> <li>v) Food Engineering</li> <li>vi) Environmental Engineering</li> </ul>	<p><b>2.1.5 Faculty of Information, Science &amp; Humanities</b></p> <ul style="list-style-type: none"> <li>i) Software Engineering</li> <li>ii) Computer Science and Information Technology</li> <li>iii) Mathematics (Administering Bachelor of Science in Computational Finance Programme)</li> <li>iv) Physics (Administering Bachelor of Science in Applied Physics Programme)</li> <li>v) Chemistry (Administering Bachelor of Science in Industrial Chemistry Programme)</li> <li>vi) Humanities (Administering Bachelor of Science in English Linguistics)</li> </ul> <p><b>2.1.6 Faculty of Architecture &amp; Management Sciences (AMS)</b></p> <ul style="list-style-type: none"> <li>i) Architecture and Planning (Also Administering Bachelor of Science in Development Studies Programme)</li> <li>ii) Economics and Management Sciences (Administering Bachelor of Science in Economics &amp; Finance and also Administering Bachelor of Science in Management Sciences Programmes)</li> </ul> <p><b>2.1.7 Thar Institute of Engineering, Sciences and Technology (TIEST)</b></p> <ul style="list-style-type: none"> <li>i) Administering Bachelor of Computer Science Programme</li> </ul>
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## 2.2 Teaching Departments

### 2.2.1 Department of Civil Engineering

*(Also administering Bachelor of Engineering in Civil with Specialization in Construction Engineering Programme)*

#### Chairperson

Prof. Dr. Rizwan-Ul-Haque Farooqui

#### Professors Emeritus

Prof. Dr. Sahibzada Farooq Ahmad Rafeeqi  
B.E. (Civil); M.S. (Civil) KFUPM, Saudi Arabia;  
Ph.D. (Structures; Heriot-Watt, UK)

#### Professors

1. Dr. Sarosh Hashmat Lodi  
B.E. (Civil) NED; M.S. (Civil) Oregon State University, USA;  
Ph.D. Heriot-Watt University, UK.
2. Dr. Muhammad Shafqat Ejaz  
B.E. (Civil) NED; M.S. (Civil) NED;  
Ph.D. Utah State University, USA.
3. Dr. Asad-ur-Rehman Khan  
B.E. (Civil) NED; M.S. (Civil) KFUPM, Saudi Arabia;  
Ph.D. (Civil) KFUPM, Saudi Arabia.
4. Dr. Syed Imran Ahmed  
B.E. (Agri. Engg) SAU, Pakistan;  
M.S. (Bio Resource Engg) Oregon State University, USA;  
M.S. (Bio Systems Engg) IOWA State University, USA;  
Ph.D. (Bio Systems Engg) IOWA State University, USA
5. Dr. Rizwan-Ul-Haque Farooqui  
B.E. (Civil) NED; M.S. (Civil) National Uni. of Singapore;  
Ph.D. (Civil) Florida International University, USA
6. Dr. Abdul Jabbar Sangi  
B.E. (Civil) NED; M.Engg. (Civil) NED  
Ph.D. Heriot-Watt University, UK
7. Dr. Amanullah Marri  
B.E. (Civil) QUEST; M.E. (Civil) Asian  
Institute of Technology, Thailand;  
Ph.D. (Civil) University of Nottingham, UK
8. Dr. Shuaib Haroon Ahmed (JPC Chair)  
B.E. (Civil) NED; M.S. (Civil) Kansas Stat University, USA  
Ph.D. (Civil) University of Illinois, Chicago, USA

#### Associate Professors

1. Dr. Haider Hassan  
B.Sc. (Hons) (Math & Computing) Kingston University;  
M.Sc. (Ind. Env. & Modeling) Uni. of Bristol UK;  
Ph.D. (Civil) University of Nottingham, UK
2. Dr. Arjumend Masood  
B.E. (Civil) NED; M.Engg. (Env.) NED;  
M. Engg. (Civil) NED; Ph.D. (Civil Engg.) NED

3. Dr. Huma Khalid  
B.E. (Civil) NED; M.Sc. (Computer Science) NED;  
Ph.D. (Computational Mechanics) Imperial College, UK;  
Post-Doc (Structural Health Monitoring) University  
of Manitoba, Canada
4. Dr. Tehmina Ayub  
B.E. (Civil) NED; M.Engg. (Civil) NED  
Ph.D. (Civil) Uni Teknologi PETRONAS, Malaysia
5. Dr. Farrukh Arif  
B.E. (Civil) NED; MEM (Construction) NED  
Ph.D. (Civil) Florida International University, USA  
Post-Doc, (Construction) Florida International Uni, USA
6. Dr. Sadaf Qasim  
B.E. (Civil) NED; M.Sc. (Env. Sc.) UoK;  
M.Engg. (Civil) NED; Ph.D. (Civil), UTP, Malaysia

#### Assistant Professors

1. Dr. Farnaz Batool  
B.E. (Civil) NED; M. Engg. (Civil) NED  
Ph.D. (Materials Structure) Uni. of Alberta, Canada
2. Dr. Syed Salman Mobeen  
B.E. (Civil) NED; M.Sc. (Structure) Uni. of Alberta, Canada;  
Ph.D. (Structure) Uni. of Alberta Canada
3. Dr. Syeda Saria Bukhary  
B.E. (Civil) NED; M.Engg. (Civil) NED;  
M.S. (Civil) Uni. of Nevada, Reno, USA;  
Ph.D. (Civil) Uni. of Nevada, USA
4. Engr. Farhan Saleem (On study leave)  
B.E. (Civil) NED; M.C.S. UoK;  
M.S (Construction Management) Florida Int. Uni. USA
5. Engr. Muhammad Saqib  
B.E. (Civil) NED; MCS UoK;  
MS(IT) PIMSAT, Karachi; MEM (Construction) NED
6. Engr. Haris Akram Bhatti  
B.E. (Civil) NED; M.Engg. (Civil Water Resources) NED
7. Dr. Muhammad Aslam Bhutto  
B.E. (Civil) QUEST; MEM (Civil) NED;  
Ph.D. (Civil) Heriot-Watt University, UK.
8. Dr. Aslam Faqeer Mohammad  
B.E. (Civil) NED; M.Engg. (Civil) NED  
Ph.D. (Civil) Sapienza University of Rome, Italy
9. Engr. Fawad Masood  
B.E. (Civil) NED; M.Engg. (Civil) NED
10. Engr. Muhammad Umer  
B.E. (Urban) NED; MEM (Construction) NED



11. Dr. Shamsoon Fareed  
*B.E. (Civil) SSUET; M. Engg (Civil) NED  
Ph.D. (Civil) Heriot-Watt University, UK*
12. Engr. Shoaib Ahmed  
*B.E. (Urban) NED; M. Engg (Civil) NED*
13. Engr. Sajjad Ali  
*B.E. (Civil) NED; M. Engg (Civil) NED*
14. Engr. Syed Muhammad Noman  
*B.E. (Urban) NED; M.S (Transportation) Hasselt Uni, Belgium*

7. Engr. Fatima Khalid  
*B.E. (Civil) NED; M.Engg. (Civil) NED*
8. Engr. Waleed Ahmed Khan  
*B.E. (Civil) NED; MEM (Construction) NED*
9. Engr. Samra Masood  
*B.E. (Civil) NED; M. Engg. (Civil) NED*
10. Engr. Faiza Saeed  
*B.E. (Urban) NED; MEM (Construction) NED*
11. Engr. Muhammad Saad Khan  
*B.E. (Civil) NED; M. Engg. (Civil) NED*
12. Engr. Muhammad Yousuf Iqbal  
*B.E. (Civil) NED; M. Engg. (Civil) NED*
13. Ms. Saima Khan  
*B.E. (Civil) NED; MEM (Construction) NED*

### Lecturers

1. Engr. Adnan Rais Ahmed  
*B.E. (Civil) NED; M.Engg. (Civil) NED*
2. Engr. Etikaf Hussain (*On study leave*)  
*B.E. (Civil) NED; M. Engg. (Civil) NED*
3. Engr. Rana Rabnawaz Ahmed (*On study leave*)  
*B.E. (Civil) NED; MEM (Construction) NED*
4. Engr. Sadia Moin  
*B.E. (Civil) NED; M.Engg (Civil) NED*
5. Engr. Wajeeha Mahmood  
*B.E. (Civil) NED; M.Engg (Civil) NED*
6. Engr. Tariq Aziz (*On study leave*)  
*B.E. (Urban) NED; M. Engg. (Structural Earthquake) NED  
Ph.D. (In Progress)*

### IT Managers

Engr. Muhammad Shahzad Raza Ali Asghar  
*B.E. (Computer) SSUET; MCIT (NED)*

### Sr. Lab Engineer

Engr. Amir Nizam  
*B.E. (Civil) NED; M. Engg. (Civil) NED*

## 2.2.2 Department of Urban and Infrastructure Engineering

### Chairperson

Prof. Dr. Adnan Qadir

### Professors

1. Prof. Dr. Adnan Qadir  
*B.E. (Civil) NED; M.Sc.(Civil) NED  
Ph.D. (Middle East Technical University, Ankara, Turkey)*
2. Prof. Dr. Muhammad Raza Mehdi  
*B.E.(Civil) NED; M.S.(Transportation);  
Ph.D. (Environmental Science)*

### Associate Professors

1. Mrs. Mah Talat Mirza  
*B.E.(Civil) NED; M.Sc. (Civil) NED*
2. Dr. Sadaqat Ullah Khan  
*B.E(Civil)NED; M.E.(Structures) NED  
Ph.D. (Civil Engg.) UTP, Malaysia*

### Assistant Professors

1. Dr. Ashar Ahmed  
*B.E. (Civil) NED; M.Engg. (Civil) NED  
Ph.D.(Civil) USM, Malaysia*
2. Dr. Sana Muqeem  
*B.E. (Civil) NED; M.Engg. (Civil) NED; Ph.D. (Malaysia)*

3. Dr. Nida Azhar  
*B.E.(Civil)NED; M.Engg.(Civil) NED  
Ph.D. (Construction Management) USA*
4. Syeda Madiha Zaidi  
*B.E.( Civil)NED; M.Engg.(Civil) NED*
5. Dr. Afzal Ahmed  
*B.E. (Urban) NED; M.S. (Civil) Uni. of Mississippi, USA;  
Ph.D. (Institute of Transportation Studies, Leeds, UK)*
6. Ms. Madiha  
*B.E.(Urban)NED; M.Engg(Civil) NED*
7. Mr. Muhammad Ahmed (*PhD Scholar, NED*)  
*B.Sc. Hons. (Geography) UoK;  
M.Sc. (Geography), UoK; M.Phil (RSGIS), UoK*
8. Syed Muhammad Fahad Abdullah  
*B.E. (Civil) NED; MEM (Water Resources Management)*
9. Mr. Shoaib Yaqub  
*B.E. (Civil) SSUET; M.Engg. (Geotechnical Engg.), NED*

### Lecturer

1. Ms. Yamna Jawaid  
*M.S. (Civil)*
2. Ms. Narmeen Tanweer Memon  
*M.Engg. (Civil)*





### 2.2.3 Department of Petroleum Engineering

#### In-Charge

Dr. Javed Haneef  
*BE. (Mechanical) NED;*  
*M.Sc. (Petroleum Tech); MCS, UoK;*  
*M.E. (Petroleum) Uni of Alberta CA;*  
*Ph.D. (Petroleum) University of Leeds, UK*

#### Assistant Professors

1. Dr. Javed Haneef  
*BE. (Mechanical) NED;*  
*M.Sc. (Petroleum Tech); MCS, UoK;*  
*M.E. (Petroleum) Uni of Alberta CA;*  
*Ph.D. (Petroleum) University of Leeds, UK*
2. Dr. Abdul Majeed  
*BE (Petroleum) MUET;*  
*M.Sc. (Petroleum) Heriot Watt Uni, UK;*  
*Ph.D. (Petroleum) University of Leeds, UK*
3. Engr. Faizan Ali  
*B.E. (Petroleum) NED;*  
*MS (Petroleum) NTNU, Norway*
4. Engr. Syed Adnan-ul- Haque  
*BE (Petroleum) MUET;*  
*MS (Petroleum) NTNU, Norway*
5. Engr. Aftab Hussain Arain (*On Study Leave*)  
*BE (Petroleum) MUET;*  
*MS (Petroleum) NTNU, Norway*

6. Engr. Shaine M. Ali Lalji  
*BE (Petroleum) NED;*  
*MS (Petroleum) NTNU, Norway*
7. Engr. Muhammad Noman Khan  
*BE (Petroleum & Natural Gas Engg) MUET Jamshoro;*  
*MS (Petroleum Engg.) UTM, Malaysia*
8. Dr. Ayesha Abbas  
*Ph.D. (Oil and Natural Gas Engineering)*

#### Lecturers

1. Engr. Syed Imran Ali  
*B.E (Petroleum) NED*
2. Engr. M. Arqam Khan  
*B.E (Petroleum) NED*
3. Engr. Muhammad Mohsin Yousufi  
*B.E (Petroleum) NED;*  
*MS (Petroleum Engg by Research) Universiti Teknologi*  
*Petronas, Malaysia*

#### IT Manager (Senior Scale)

Ms. Bushra Khalid  
*BE (CIS); MCIT (NED)*

### 2.2.4 Department of Earthquake Engineering

#### Chairperson

Prof. Dr. Muhammad Masood Rafi

#### Professors

1. Prof. Dr. Muhammad Masood Rafi  
*B.E. (Civil) NED; M.Sc. (Civil) NED*  
*Ph.D. (University of Ulster, UK)*
2. Prof. Dr. Rashid Ahmed Khan  
*B.E. (Civil) NED; M.Sc. (Civil) NED*  
*Ph.D. (Heriot-Watt University, UK)*

#### Associate Professor

Dr. Mukesh Kumar (*On Ex-Pakistan Leave*)  
*B.E.(Civil) NED;*  
*M.E.(Res) (Engineering Seismology) NED;*  
*M.Engg. (Earthquake) Italy;*  
*Ph.D. (Imperial College London, UK)*

#### Lab Engineer

Mr. Shahid Hussain  
*B.E.(EL) SSUET*

### 2.2.5 Department of Mechanical Engineering

#### Chairperson

Prof. Dr. Nasir Uddin Shaikh

#### Professors

1. Prof. Dr. Nasir Uddin Shaikh  
*B.E.(Mech.) NED; M.Sc.(Mech.)NED;*  
*Ph.D.(Thermofluids) Canada*
2. Prof. Dr. Mubashir Ali Siddiqui  
*B.E.(Mech.) NED; M.S(Mfg) USA ;*  
*Ph.D. (Industrial/Mech) USA*

3. Prof. Dr. Murtaza Mehdi  
*B.E (Mech.) NED; M.Engg. (Mech.) NED;*  
*Ph.D. (Mech.) South Korea*
4. Prof. Dr. Muhammad Ali Khan  
*B.E (Mech.) NED; Ph.D. (Mech.) United Kingdom*

#### Associate Professors

1. Mr. S. M. Rizwan Azeem  
*B.E (Mech.) NED; M. Sc. (Engg. Science) UK*



2. Dr. Muhammad Shakaib  
*B.E (Mech.) NED; M.Sc. (Mech.) NED;  
Ph.D. (Desalination) NED*
3. Dr. Maaz Akhtar  
*B.E (Mech.) NED; M.Engg. (Industrial Mfg.) NED;  
Ph.D. (Mech.) Oman*

#### **Assistant Professors**

1. Ms. Amber Fishan Zafar  
*B.E (Mech.) NED; M.S.(Mech.) NUST*
2. Mr. Imran Sikandar  
*B.E (Mech.); MS (Mech.) USA*
3. Dr. Muhammad Ehtesham ul Haque  
*B.E (Mech); MS (Mech.) NED; Ph.D. (Mech.) Malaysia*
4. Dr. Muhammad Uzair  
*B.E (Mech.) NED; M. Engg.(Mech.) NED;  
Ph.D. (Mech) New Zealand*
5. Mr. Masood Ahmed Khan  
*B.E (Mech.) NED; M. Sc. (Computer Science) NED;  
M. Engg (Mfg.) NED*
6. Mr. Kashif Noor  
*B.E (Mech.)NED; M. Engg(Mech.) NED; MBA*
7. Ms. Erum Khan  
*B.E (Mech.) NED; M. Engg(Mech.) NED*
8. Dr. Tariq Jamil  
*B.E (Mech.) NED; M. Engg(Mech.) NED;  
Ph.D. (Mech.) USA*
9. Dr. Mahrukh  
*B.E (Mech.) NED; M. Engg(Mech.) NED;  
Ph.D. (Mech) UK*
10. Mr. Mumtaz Hussain Qureshi (*On study leave*)  
*B.E. (Mech) NED; M. Engg. (Mech) NED*
11. Syed Ahmad Raza (*On study leave*)  
*B.E (Mech.) NED; M. Engg (Mech.) NED*
12. Mr. Muhammad Muzammil (*On study leave*)  
*B.E. (Materials) NED; M.Engg. (Mech.) NED*
13. Mr. Saqib Sharif  
*B.E. (Mech.) NED; M.Engg. (Mech.) NED*
14. Mr. Adeel Ahmed Khan  
*B.E. (Mech.) NED; M.Engg. (Mech.) NED*
15. Dr. Ing. Usman Allaudin  
*B.E. (Mech) NED; M.Engg. (Mech) NED;  
Ph. D (Mech) Germany*
16. Syed Aun Ali Rizvi  
*B.E. (Mech) NED; M.Engg. (Mech) NUST*
17. Mr. Arshad Siddiqui  
*B.E. (Mech) NED; M.Engg. (Mech) Canada*

#### **Lecturers**

1. Ms. Bushra Fatima  
*B.E. (Mech.) NED; M. Engg. (Energy Systems) Turkey*
2. Mr. Abdul Qadir  
*B.E. (Ind. & Mfg.) NED; M. Engg (Mech.) NED*
3. Mr. Muhammad Uzair Yousuf (*On study leave*)  
*B.E. (Mech) NED; M. Engg (Mech.) NED*
4. Mr. Muhammad Azam  
*B.E. (Mech) NED; M.Engg. (Mfg.) NED*
5. Mr. Seheroze Tahir Khan  
*B.E. (Mech.) NED; MEM (Ind.Mang) NED*
6. Ms. Hafiza Sumaiya Mohsin  
*B.E. (Mech.) NED; M. Engg. (Mech.) NED*
7. Mr. Muhammad Muzammil Ejaz  
*B.E. (Mech.) NED; M.S. (Thermal Power) NUST*
8. Mr. Abdul Ghaffar  
*B.E. (Mech.) NED; M. Engg. (Mech.) NED*
9. Mr. S.M. Hassan Liaquat  
*B.S. (Mech.) UET Texila; M.S. (Mech.) China*
10. Mr. Sohail Hasnain  
*B.E. (Mech.) NED; M. Engg. (Mech.) NED*
11. Ms. Ifrah Asif  
*B.E. (Ind. & Mfg.) NED; M. Engg. (Mfg.) NED*
12. Mr. Zain Shahid  
*B.E. (Mech.) NED; M. Engg. (Mech.) NED*
13. Mr. Muhammad Siddiqui  
*B.E. (Mech.) NED; MEM (Energy & Plant Mang.) NED*
14. Mr. Ahsan Ahmed  
*B.E. (Mech.) NED; MEM (Energy & Plant Mang.) NED*
15. Mr. Talha Bin Nadeem  
*B.E. (Mech.); MEM (Energy & Plant Mang.) NED*
16. Mr. Bilal Ahmed Soomro  
*B.E. (Mech.) MUET; M. Engg.(Mech.) NED*
17. Mr. Azhan Ahmed  
*B.E. (Mech.) NED; M. Engg (Mech.) NED*
18. Syed Muhammad Asad Akhtar  
*B.E. (Mech.) NED; M. Engg.(Mech.) NED*

#### **Sr. Laboratory Engineer**

Mr. Atiq ur Rab Siddiqui  
*B.E (Mech.) NED; M.Sc. (Met. Engg.) NED*

#### **Workshop Superintendent**

Mr. Arshad Nisar  
*DAE (Wood Work Tech); B.A (Political Science) UoK;  
B. Tech (Mech) NED; B. Tech (Hons) (Mech) NED;  
M.P.A. (Public Administration) UoK*



## 2.2.6 Department of Textile Engineering

(Also administering Bachelor of Science in Textile Sciences Programme)

### Chairperson

Dr. Salma Farooq

### Associate Professor

1. Dr. Sheraz Hussain Siddique  
*B.E (Textile Engg); M.Sc. (Textile & Clothing, Germany);  
Ph.D. (Textile, University of Manchester UK)*
2. Dr. Salma Farooq  
*B.Sc. (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, Heriot Watt University, UK)*
3. Dr. Ali Hasan Mahmood  
*B.E (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, University of Manchester, UK)*
4. Dr. Bilal Zahid  
*B.E. (Textile Engg.); M.Engg. (Textile);  
Ph.D. (Textile Science & Technology, Uni. of Manchester, UK)*
5. Dr. Muhammad Dawood Husain  
*B.E. (Textile Engg); M.Sc. (Textile & Clothing, Germany);  
Ph.D. (Textile, University of Manchester, UK)*
6. Dr. Fareha Asim  
*B.E (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, NED University)*
7. Dr. Muhammad Ali  
*B.E. (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, The University of Leeds, UK)*
8. Dr. M. Owais Raza Siddiqui  
*B.E. (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, Heriot Watt University, UK)*

### Assistant Professors

1. Mr. Farriduddin Ahmed  
*B.Sc. (Hons); M.Sc. (Applied Chemistry)*
2. Dr. Agha Deedar Hussain  
*B.Sc. (Textile Engg); M.Engg. (Textile);  
Ph.D. (Supply Chain Management, Uni of Minho, Portugal)*

3. Dr. Saira Faisal  
*B.E (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, University of Leeds, UK)*
4. Dr. Shenela Naqvi  
*B.E (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, University of Manchester, UK)*
5. Dr. Farhana Naeem  
*B.E (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile Engineering)*
6. Dr. Muhammad Amir Qureshi  
*B.E (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, Heriot Watt University, UK)*
7. Mr. Muhammad Zubair (On study leave)  
*B.E. (Textile Engg); M.Engg. (Textile);  
Ph.D. (In Progress)*
8. Dr. Quratulain Mohtashim  
*B.E. (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, University of Manchester, UK)*

### Lecturers

1. Mrs. Sabeen Jahanzeb  
*B.E. (Textile Engg); M. Engg. (Textile)*
2. Mrs. Tahreem Baig  
*B.E. (Textile Engg); M.E.M (Industrial Mgt.)*

### IT Manager (Senior Scale)

Mr. Arsalan Waheed  
*B.E. (Comp Sys.); M. Engg. (Comp. Sys.)*

### IT Manager (Junior Scale)

Ms. Aisha Bano  
*B.E. (Comp Sys.); M. Engg. (Comp. Sys.)*

## 2.2.7 Department of Industrial and Manufacturing Engineering

### Chairperson

Dr. Maqsood Ahmed Khan

### Professors

1. Prof. Dr. Muhammad Tufail  
*B.E. (Mech) NED;  
M.Sc. (Manufacturing System) Nottingham Uni, UK;  
Ph.D. Nottingham University, UK; C.Eng; FIMechE, Mem ASME*
2. Prof. Dr. Syed Amir Iqbal  
*B.E. (Mech.) NED; M.Engg. (Mfg. Engg) NED; Ph.D. (UK)*

### Associate Professor

1. Dr. Maqsood Ahmed Khan  
*B.E.(Mech); M. Engg. (Mfg. Engg); Ph.D. (Canada)*
2. Dr. Muhammad Fahad  
*B.E. (Ind. & Mfg.); M.Sc. with Mfg. Mgt. Specialization (U.K);  
Ph.D. (UK)*



### Assistant Professors

1. Mr. Ali Zulqarnain  
*B.E.(Mech); M.Engg. (Mfg. Engg); Ph.D (In Progress)*
2. Ms. Sadia Majeed  
*B.A. (Hons); M.A. (Eco);  
MAS (Industrial Eco.); M. Phil (KU)*
3. Dr. Muhammad Wasif  
*B.E. (Mech Engg); M. Engg. (Mfg. Engg); Ph.D. (Canada)*
4. Dr. Syed Mehmood Hasan  
*B.E. (Ind. & Mfg. Engg); M.S (Engg. Mgt.) UK;  
Ph.D. United Kingdom*
5. Dr. Asim Zaheer  
*B.E.(Mech.); M.S (Engg. Mgt.); Ph.D. (UK)*
6. Ms. Shaheen Perween  
*B.E.(Mech.); M.Engg (Mfg. Engg.); Ph.D. (In Progress)*
7. Dr. Aqeel Ahmed  
*B.E. (Mech. Engg); M. Engg (Mfg. Engg); Ph.D. (Canada)*
8. Dr. Shakeel Ahmed  
*B.E. (Ind & Mfg. Engg); M. Engg. (Energy Systems);  
Ph.D. (UK)*
9. Ms. Rabia Siddiqui  
*B.E. (Ind & Mfg. Engg); M. Engg. (Mfg. Engg);*
10. Dr. Anis Fatima  
*B.E. (Ind. & Mfg. Engg); M.Engg (Mfg. Engg); Ph.D. (UK)*

11. Dr. Shehryar Mohsin Qureshi  
*B.E. (Ind. & Mfg. Engg); M.Engg (Engg. Mgt.) Ph.D. (Korea)*
12. Ms. Rabiya Zubair  
*B.E. (Ind & Mfg Engg); M. Engg. (Mfg. Engg)*
13. Ms. Javeria  
*B.E. (Ind & Mfg Engg); M. Engg. (Mfg); Ph.D. (In Progress)*
14. Ms. Naima Javed  
*B.E. (Ind & Mfg Engg); M. Engg. (Mfg Engg)*

### Lecturer

1. Ms. Saima Yaqoob  
*B.E. (Ind. & Mfg. Engg.); M.Engg. (Engg. Mgt.)*
2. Mr. Hamood-Ur-Rehman (On Study Leave)  
*B.E. (Ind. & Mfg. Engg.); M.S. (Mech.) Hungary*
3. Ms. Maria Iruj  
*B.E. (Ind. & Mfg. Engg.); M.Engg. (Mfg. Engg.)*
4. Syed Raheel Adeel  
*B.E. (Ind. & Mfg. Engg.); M.Engg. (Mech.)*
5. Mr. Muhammad Zaid Khan  
*B.E. (Ind. & Mfg. Engg.); M.Engg. (Engg. Mgt)*

### IT Manager (Junior Scale)

Ms. Noureen Jahan  
BCIT; MCIT

## 2.2.8 Department of Automotive and Marine Engineering

### Chairperson

Prof. Dr.-Ing. Syed Mushahid Hussain Hashmi

### Professor

Prof. Dr.-Ing. Syed Mushahid Hussain Hashmi  
*B.E (Mechanical); M.Sc. (Mechanical) NED;  
Ph.D. (Mechanical) Germany*

### Associate Professor

Dr. Faraz Akbar  
*B.E (Mechanical) NED; Ph.D. (Mechanical) UK*

### Assistant Professors

1. Mr. Munir Ahmed  
*B.E (Mechanical) NED; M.A.Sc. (Mechanical)  
University of Toronto, Canada; CSCP; APICS, USA*
2. Dr. Saqib Jamshed Rind  
*B.E (Industrial Electronics) IIEE-NED  
M.Sc. (Automation & Control) Uni of Newcastle, England.  
Ph.D. (Motor Drives for Electric Vehicles) University  
of Liverpool, England; MPEC (PAK); MIEEE(USA)*

3. Dr. Noman Uddin Yousuf  
*B.E (Mechanical) NED; M.S (Mechanical) Bradley, USA;  
Ph.D. (Mechanical) Auckland Uni of Tech. Newzealand*
4. Mr. Assad Anis  
*B.E (Mechanical) NED; M.S.(Mechanical) Finland, PE*
5. Engr. Dr. Muhammad Aamir Qureshi  
*B.E (Electrical) NED; M.Engg. (Electrical) NED  
Ph.D. (Communication & Information Systems)  
Beijing Institute of Technology, Beijing, P.R. China*

### Lecturer

1. Ms. Yasmeen Khan  
*B.E (Industrial & Manufacturing) NED  
M.Engg. (Automotive Manufacturing) NED*
2. Syed Muhammad Abbas Rizvi  
*M.S. (Mechanical Engineering)*

### IT Manager (Junior Scale)

Ms. Faiza Saleem  
*B.S. (Computer Engineering) SSUET; MCIT (NED)*

### Assistant Workshop Superintendent

Syed Ali Ahmed  
*B. Tech.; B.Tech. (Honors) NED*





## 2.2.9 Department of Electrical Engineering

### Chairperson

Prof. Dr. Attaullah Khawaja

### Professors

1. Prof. Dr. Saad Ahmed Qazi  
*B.E.(Electrical)NEDUET*  
*M.Sc.(DSP) UK; Ph.D.(UK)*
2. Prof. Dr. Attaullah Khawaja  
*B.E. (Electrical) MUET; M.Engg. (Electrical) NED;*  
*Ph.D. (Comm. & Info. Sys) (B.I.T) China*

### Associate Professors

1. Dr. Muhammad Ali Memon  
*B.E.(Electrical); M.Engg.NEDUET;*  
*MBA (MIS); Ph.D. (USA)*
2. Dr. Muhammad Mohsin Aman  
*B.E.(Electrical); M. Engg. (Electrical) NED*  
*Ph.D.(Malaysia)*

### Assistant Professors

1. Mr. Muhammad Javed  
*B.E.(Electrical); M.Sc (Electrical) NED*  
*Ph.D. (In Progress)*
2. Ms. Shahnaz Tabassum  
*B.E.(Electrical); M. Engg(Electrical) NED*
3. Mr. Shoaib Siddiqui  
*B.E.(Electrical); M. Engg. (Electrical) NED*
4. Dr. Raja Masood Larik  
*B.E.(Electrical); M. Engg. (Electrical) NED*  
*Ph.D. (Electrical) University of Malaysia*
5. Dr. Umbrin Sultana  
*B.E.(Electrical) NED; M. Engg. (Electrical) NED*  
*Ph.D. (Malaysia)*
6. Ms. Arjumand Samad  
*B.E.(Electrical) NED; M. Engg.(Electrical)NED*
7. Dr. Abdurrahman Javed Sheikh  
*B.E.(Electrical); M. Engg.(EE) NEDUET*  
*Ph.D. (Malaysia)*
8. Dr. Riazuddin  
*B.E. (Electrical), NED; M.Engg. (Electrical) NED;*  
*Ph.D (Mechatronics), GIST, South Korea.*
9. Mr. Umar Sajid  
*B.E.(Electrical) NED; M.Sc. (Comm. Engg. & SP) UK;*  
*Ph.D. (In Progress)*
10. Dr. Abul Ghani Abro  
*Ph.D. (Electrical Engg.)*

11. Dr. KirshanLal Khatri  
*B.E.(Electrical) MUET; MSEE (Telecom) SSUET;*  
*Ph.D. (USA); Professional Diploma Project*  
*Management, PIM Karachi.*
12. Dr. Mirza Muhammad Ali Baig  
*B.E.(Electrical); M. Engg. (Electrical) NED; Ph.D. (NED)*
13. Ms. Samiya Zafar  
*B.E. (Electrical); M. Engg. (Electrical) NED; Ph.D. (In Progress)*
14. Dr. Beenish Sultana  
*B.E.(Electrical); M. Engg. (Electrical) NED;*  
*Ph.D. (Malaysia)*
15. Mr. Adnan  
*B.E.(Electrical) NED; M. Engg. (Electrical) NED;*
16. Mr. Hassan-ul-Haq  
*B.E.(Electrical); M. Engg. (Electrical) NED;*
17. Mr. Shariq Shaikh  
*B.E.(Electrical) NED; M. Engg. (Electrical) NED*
18. Mr. Fezan Rafique (On Study Leave)  
*B.E.(Electrical) NED; M. Engg. (Electrical) NED*  
*Ph.D. (In Progress)*
19. Mr. Muhammad Hammad Uddin (On Study Leave)  
*B.E.(Electrical) NED; M. Engg. (Electrical) NED*  
*Ph.D. (In Progress)*

### Lecturers

1. Ms. Uzma Perveen  
*B.E. (Electrical); M. Engg. (Electrical) NED;*  
*Ph.D. (In Progress)*
2. Mr. Muhammad Irfan Sheikh  
*B.E. (Electrical); M. Engg. (Electrical) NED*
3. Ms. Ayesha Saeed  
*B.E.(Electrical); M. Engg. (Electrical) NED*
4. Mr. Muhammad Omar  
*B.E.(Electrical) NED; M. Engg. (Electrical) NED*  
*Ph.D. (In Progress)*
5. Ms. Najia Naveed  
*B.E (Electrical) NED; M. Engg. (Electrical) NED*  
*Ph.D. (In Progress)*
6. Mr. Iqbal Azeem  
*B.E.(Electrical) NED; M.Engg. (Electrical) NED*
7. Ms. Ayesha Khan  
*B.E (Electrical) NED; M. Engg (Electrical) NED*
8. Syed Muhammad Rashid Hussain  
*B.E (Electrical) NED; M. Engg. (Electrical) NED*



9. Ms. Hiba Kamal Zuberi  
*B.E (Electrical) NED; M. Engg. (NED)*
10. Mr. Muhammad Farooq Siddiqui  
*B.E (Electrical) NED; M. Engg. (Electrical) NED*
11. Mr. Talha Javed Solejo  
*B.E (Electrical) NED; M. Engg. (Electrical) NED*
12. Ms. Anila Abbas  
*B.E (Electrical) NED; M. Engg. (Electrical) NED*
13. Mr. Muhammad Arshad  
*B.E (Electrical) MUET; M. Engg. (Electrical) NED*
14. Mr. Muhammad Uzair Khan  
*B.E (Electrical) NED; M. Engg. (Electrical) NED*
15. Mr. Nabeel Fayyaz  
*B.E (Electrical) NED; M. Engg. (Electrical) NED*

16. Mr. Hafiz Muhammad Furqan  
*B.E (Electrical) NED; M. Engg. (Electrical) NED*
17. Mr. Abdullah Munir  
*M. Engg. (Electrical)*

#### **Lab Engineer**

1. Mr. Ghulam Hussain Muger (Sr. Scale)  
*B.E.(Electrical) MUET; M. Engg. (Electrical) NED*
2. Mr. Muhammad Waseem  
*B.E.(Electrical) QUEST; M. Engg. (Electrical) NED*

#### **IT Manager (Sr. Scale)**

Engr. Syed Muhammad Zahid  
*B.E. (Electrical); M.Sc. (Computer Science) NED;  
Ph.D. (In Progress)*

### **2.2.10 Department of Computer & Information Systems Engineering**

#### **Chairperson**

Prof. Dr. Muhammad Ali Ismail

#### **Professors**

1. Prof. Dr. Muhammad Ali Ismail  
*B.E.(Comp & Info. Sys.); M.Engg.(Comp Sys.);  
Ph.D. (High Performance Computing);  
Post Doctrate (ADSE) Romania*
2. Prof. Dr. Muhammad Khurram  
*B.E. (Comp. Sys.); M.Engg. (Comp. Sys.);  
Ph.D. (IC Design) New Zealand*
3. Prof. Dr. Syed Abbas Ali  
*B.E.(Comp. Sys.); M.Engg.(Electrical)  
Ph.D. (Automatic Speech Recognition & Machine Learning)*

#### **Associate Professors**

Dr.-Ing. Shehzad Hasan  
*B.E.(Comp Sys.); M.Engg.(Comp Sys.);  
Ph.D. (VLSI Testing) Germany*

#### **Assistant Professors**

1. Mr. Shahab Tahzeeb  
*B.E.(Comp Sys.); M.Engg.(Comp Sys.); Ph.D. (In Progress)*
2. Syed Zafar Qasim  
*B.E. (Comp. Sys.); M. Engg. (Comp. Sys.); Ph.D. (In Progress)*
3. Ms. Anita Ali  
*B.E.(Comp Sys.); M.Engg.(Comp Sys.)*
4. Dr. Muhammad Asad Arfeen  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp. Sys.);  
Ph.D. (Teletraffic Engineering) New Zealand*
5. Ms. Hina Danish Khan  
*B.E.(Comp & Info. Sys.); M.Engg.(Comp Sys.)*

6. Dr. Maria Waqas  
*B.E.(Comp Sys.); M.Engg.(Comp Sys.);  
Ph.D. (Computational Biology)*
7. Ms. Urooj Ainuddin  
*B.E.(Comp Sys.); M.S.(Comp Sys.); Ph.D. (In Progress)*
8. Ms. Zareen Sadiq  
*B.E.(Comp & Info. Sys.); M.Engg.(Comp Sys.);  
Ph.D. (In Progress)*
9. Mr. Gul Munir Ujjan (On study leave)  
*B.E.(Comp Sys.); M.Engg.(Comp Sys.);*
10. Dr. Majida Kazmi  
*B.E. (Elect.); M. Engg. (Elect.);  
Ph.D. (VLSI Design for Digital Image Processing)*
11. Dr. Saad Qasim  
*B.E. (Comp & Info. Sys.); M. Engg. (Comp Sys.);  
Ph.D. (Artificial Intelligence / Neuromorphic Hardware)*
12. Ms. Sumayya Zafar  
*B.E. (Comp & Info. Sys.); M. Engg. (Comp Sys.); Ph.D. (In Progress)*

#### **Lecturers**

1. Syed Aqeel Haider  
*B.S. (Electronic); M. Engg. (Comp Sys);  
Ph.D. (In Progress)*
2. Mr. Kashif Asrar  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.)*
3. Ms. Fauzia Yasir  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.)*
4. Ms. Hameeza Ahmed  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.);  
Ph.D. (In Progress)*
5. Mr. Muhammad Ali Akhter  
*B.E. (Comp Info. Sys.); M. Engg. (Comp Sys.)*



6. Ms. Fakhra Aftab  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.)*
7. Ms. Mehwish Raza  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.)*
8. Mr. Umar Iftikhar  
*B.E. (Electrical); M.S. (Comp Engg.)*
9. Syeda Ramish Fatima  
*B.E. (Comp & Info. Sys.); M.S. (Comp Sys.)*

10. Ms. Ibhar Ishrat  
*B.E. (Comp & Info. Sys.); M.S. (Comp Sys.)*
11. Mr. Muhammad Nabeel Ibrahim Khan  
*B.E. (Electrical); M.S. (Information Security)*

#### **I.T.Manager (Jr. Scale)**

Mrs. Nida Fouq  
BCIT

### **2.2.11 Department of Electronic Engineering**

*(Also administering Bachelor of Engineering in Telecommunications Programme)*

#### **Chairperson**

Prof. Dr. Syed Muhammad Usman Ali Shah

#### **Professors**

Prof. Dr. Syed Muhammad Usman Ali Shah  
*B.E (Electronic) NED; M.Sc (Electrical) NED;  
Ph.D. (Nano-Electronics) Linkoping Uni (Sweden);  
HEC approved Ph.D. Supervisor*

#### **Associate Professors**

1. Dr. Ghous Bakhsh  
*B.E(Electronic) ; M.Engg(Electronic)  
Ph.D.(Electrical) Michigan Tech, University USA*
2. Dr. Muhammad Imran Aslam  
*B.E (Electrical) NED; M.Engg (Electrical) NED;  
Ph.D. (Electrical) Michigan Tech, USA*

#### **Assistant Professors**

1. Dr. Sadia Muniza Faraz  
*B.E (Electrical)NED; M.Engg (Electronic) NED;  
Licentiate of Engg. (Semiconductor Physics) Linkoping  
Uni (LiU) Sweden; Ph.D (Electronic Engg.) NED*
2. Dr. Hashim Raza Khan  
*B.E (Electrical) NED; M.Sc (Communication) RWTH  
Aachen, Germany; Ph.D (Electronic) NED*
3. Dr. Syed Riaz-un-Nabi Jafri  
*B.E. (Industrial Electronic) IIEE (NED);  
M.Engg (Electronic Engg) NED; Ph.D. (Robotics) IIT, Italy  
Postdoctorate (ITC-Nederland)*
4. Dr. Amir Zeb  
*B.E (Electrical) NED; M.Engg (Telecommunication) NED;  
Ph. D. (Wireless Communication/Cognitive Radio) NED*
5. Dr. Tahir Malik  
*B.E (Electrical) NUST; M.Sc (Telecommunications &  
Info. System) Essex, UK; Ph.D. (Electrical & Electronic  
Engg.) Uni of Canterbury, NewZealand*
6. Mr. Shahzad Siddiqi  
*B.E (Electrical) NED; M.Engg (Telecommunications) NED*
7. Mr. Safi Ahmed Zakai  
*B.E (Electrical) NED; MBA (Marketing) IBA Karachi;  
M. Engg. (Telecommunications) NED;  
M.Phil (Management) UoK.*

8. Ms. Nida Nasir  
*B.E (Electronic) NED; M.Engg (Telecommunications) NED*
9. Dr. Sana Arshad  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED;  
Ph.D. (Electronic Engg.) NED*
10. Ms. Saba Ahmed  
*B.E. (Electrical) NED; M. Engg (Telecommunications) NED*
11. Mr. Abdul Raheem Qureshi *(On study leave)*  
*B.E (Electronic) NED; M.Sc (Communications) LiU Sweden  
Ph.D. (Electronic Engg.)TU Delft, The Netherlands (In Progress)*
12. Dr. Sunila Akbar  
*B.E. (Electrical) NED; M.Engg (Telecomm.) NED;  
Ph.D. (Telecommunications) NED*
13. Ms. Uzma Afsheen  
*B.E. (Electrical) NED; M.Engg (Telecommunications) NED  
Ph.D. (In Progress)*
14. Dr. Fahim Ull Haque  
*B.E. (Telecommunications) NED  
M.Engg (Telecommunications) NED  
Ph.D. (Electrical Engg.) Linkoping University, Sweden*
15. Dr. Yawar Rehman  
*B.E. (Electronic) MUET;  
M.Engg. (Telecommunication) Hamdard University;  
Ph.D (Electronics & Communication) Hanyang  
University South Korea*
16. Dr. Bushra Tasaduq (On Leave)  
*B.E. (Electronic) NED; M.Engg (Electronic) NED;  
Ph.D (Nanotechnology and MEMS) Georgia Institute  
of Tech. Graduate School, USA*
17. Dr. Rizwan Aslam Butt  
*B.E. (Electronic) NED; MCIT NED; M.Engg (Telecom) NED;  
Ph.D (Communication Engg.) Malaysia*
18. Dr. Sundus Ali  
*B.S. (Telecommunications) FAST-NU;  
M.Engg (Telecommunications) Hamdard University;  
Ph.D. (Telecommunications) NED*
19. Dr. Amna Shabbir  
*B.E. (Telecomm) NED; M.Engg. (Telecomm) NED;  
Ph.D (Telecommunication) NED*
20. Ms. Saleha Bano  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED  
Ph.D (Electronic) NED*



### Lecturers

1. Ms. Hira Mariam  
*B.E. (Telecommunications) NED;  
M.Engg (Telecommunications) NED;  
Ph.D. (Telecommunications) NED (In Progress)*
2. Mr. Muhammad Nasir  
*B.E. (Electronic) NED; M.Sc. (Computer Science) NED;  
M.Engg. (Electronic Engg.) In Progress*
3. Ms. Madiha Mazhar  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED;*
4. Ms. Maheen Mazhar  
*B.E. (Electronic) NED; M.Engg (Electronic) NED;  
Ph.D (Electronic Engg.) NED (In Progress)*
5. Ms. Ayesha Akhtar  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED*
6. Ms. Saba Fakir  
*B.E. (Electronic) NED; M.Engg. (Telecommunications) NED*
7. Mr. Tariq Rehman (On study leave)  
*B.E. (Industrial Electronic) IIEE (NED);  
M.Engg. (Electronic) NED;  
Ph.D. (Electronic) Malaysia (In Progress)*
8. Ms. Hira Imtiaz  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED*
9. Sheikh Zahid Ali Siddiqui (On study leave)  
*B.E (Electronic) NED; M.Engg (Embedded Computing)  
Chosun University South Korea);  
Ph.D. (Computer Vision) Sogang University, South Korea*
10. Ms. Komal Masroor (On study leave)  
*B.E (Telecom) NED; M.Engg (Telecom) NED*
11. Mr. Shahid ur Rehman (On study leave)  
*B.E (Electrical) NED; M.Engg. (Telecom) NED*
12. Syed Muneeb Ahmed  
*B.E (Telecom) SSUET; M.Engg NED*

13. Ms. Arham Iqbal  
*B.E (Electronic) NED; M.Engg (Ind. Electronic)*
14. Ms. Sidra Rahman  
*B.E (Electronic) NED; M.Engg (Electronic) NED*
15. Ms. Aqsa Khan  
*B.E (Electronic) NED; M.Engg. (Electronic) NED*
16. Ms. Fatima Muhammad Saleem  
*B.E (Electronic) NED; M.Sc. (Electrical Engg. & IT) Otto  
Von Guericke University Magdeburg, Germany)*

### Senior Laboratory Engineer

Mr. Danish Mahmood Khan (On study leave)  
*B.E.(Telecommunications) NED  
M.Engg.(Telecommunications) NED*

### IT Managers

1. Mr. Muhammad Yasir Khan  
*BCIT (University of Sindh Jamshoro)*
2. Mr. Waqas Raza  
*MBA (HRM), FUUAST; B.E. (Comp Sys. Engg.) SSUET*

### Sr. Manager Instrumentation Centre (SMIC)

Dr. Hashim Raza Khan  
*B.E. (Electrical) NED;  
M.Sc. (Communications) RWTH Aachen, Germany;  
Ph.D. (Electronic Engg.) NED*

### Sr. Instrumentation Engineer (Instrumentation Centre)

Syed Hasnain Ali Naqvi  
*B.E.( Industrial Electronic) IIEE;  
M.S. (Instrumentation & Control); UK*

### Jr. Instrumentation Engineers (Instrumentation Centre)

1. Mr. Asim Khan  
*B.E.(Electronic) NED; M.Engg. (Electronic) NED*
2. Mr. Adnan Rashid  
*B.E.(Electronic) UIT; M.Engg. (Electronic) NED*

## 2.2.12 Department of Biomedical Engineering

*The Department is located in NED-LEJ Campus*

### Chairperson

Prof. Dr. Ali Raza Jafri

### Professors

1. Prof. Dr. Ali Raza Jafri  
*B.E. (Mech) NEDUET; M.Engg. (Mech) NEDUET;  
Ph.D. (Mechatronics) BIT, China*
2. Prof. Dr. Farzana Yasmin  
*Ph.D. (Biochemistry) UoK;  
Post-Doctorate (State University of New York, USA)*

### Associate Professors

Dr. Engr. Eraj Humayun Mirza  
*B.S. (Biomedical Engineering) SSUET;  
M.S. (Biomedical Engineering), Uni of Dundee, UK  
Ph.D. (Biomedical Engineering) University of Malaya*

### Assistant Professors

1. Dr. Syed Muhammad Wasim Raza  
*M.B.B.S., PGDPA., MAS Sindh Medical College, UoK;  
Ph.D (Biomechanics, Orthopedic & Motion Analysis)  
University of Dundee, UK*
2. Ms. Rehana Kousar  
*B.Sc. (Biology) Shah Abdul Latif Uni Khairpur;  
M.Sc. (Biological Science) Qaid-e-Azam Uni Islamabad;  
M.Phil. (Developmental Biology) Qaid-e-Azam Uni Islamabad;*
3. Dr. Furqan Ahmed  
*M.B.B.S. (SMC); R.M.P;  
Ph.D. (Biomaterials/Tissue Engineering); Australia*
4. Dr. Muhammad Abul Hasan  
*B.E.(Electronics) NEDUET;  
M. Engg. (Ind. Electronic) NEDUET  
Ph.D. (Biomedical Engineering); University of Glasgow UK*





5. Dr. Bilal Ahmed Usmani  
*M.Sc. (Mathematics) (Pure) UoK;  
M.Phil (Mathematics) UoK;  
Ph.D (Mathematical Epidemiology); Uni of Glasgow, UK*

#### Lecturers

1. Ms. Tajwar Sultana  
*B.E. (Comp & Info. Sys) NEDUET; M.Engg. (Comp. Sys.) NED*
2. Ms. Saima Soomro (*On study leave*)  
*B.E.(Biomedical) NED; M.E.(Biomedical) NED*

3. Ms. Madeeha Sadia (*On study leave*)  
*B.S. (Biomedical) SSUET; M.Engg(Electronic) NEDUET;*
4. Ms. Uzma Nadeem (*On study leave*)  
*B.E. (Biomedical) NED; M.E. (Biomedical) NED*
5. Engr. Mustafain Ali  
*B.E. (Biomedical) NED; M.S. (Applied Mathematics) NED  
Ph.D. (Biomedical Engineering) NED (In Progress)*

### 2.2.13 Department of Materials Engineering

#### Chairperson (Acting)

Prof. Dr. Asif Ahmed Shaikh

#### Associate Professors

1. Dr. Fayaz Hussain  
*B.E. (Metallurgical) MUET; M.Engg. (Materials) NED  
PhD (Functional Materials and Devices),  
The University of Sheffield, UK.*
2. Dr. Muhammad Sohail  
*B.E. (Ind. & Mfg.) NED; M.Engg. (Materials) NED;  
Ph.D. (Welding Simulation) South Korea*

#### Assistant Professors

1. Dr. S. M. Sajid Ali Asghar  
*B.E. (Metallurgy and Materials) MUET;  
M.Engg. (Materials) NED; Ph.D. (UK)*
2. Engr. Humair Ahmed Siddiqui (*On study leave*)  
*B.E. (Materials) NED; M.Engg. (Materials Engg.) NED  
Ph.D. (In Progress) UK*
3. Engr. Muhammad Faizan (*On study leave*)  
*B.E (Materials) NED; M.Engg. (Materials) NED;  
Ph.D. (In Progress) South Korea*
4. Engr. Abdul Rauf Jamali  
*B.E (Metallurgy & Materials) MUET;  
M.Sc. (Materials Engg.) Germany*

5. Dr. Faaz Ahmed Butt  
*B.E (Metallurgical) NED; M.Engg. (Materials) NED;  
Ph.D. (Turkey)*

#### Lecturers

1. Engr. Danish Majeed  
*B.E. (Metallurgy and Materials) MUET;  
M.Engg. (Materials) NED*
2. Engr. M. Wasiq Ali Khan  
*B.E (Materials) NED; M.Engg. (Materials) NED;*
3. Engr. Mudassir Farooq  
*B.E (Metallurgy) NED; M.S. (Materials Engg) KSA;*
4. Ms. Ambreen Azmat  
*B.E (Materials) NED; M.Engg. (Materials) NED;*
5. Ms. Shafaq Asrar  
*B.E (Materials) NED; M.Engg. (Materials) NED;*
6. Engr. Umair Jamal  
*B.E (Metallurgy) NED; M.E.M. (Ind. & Mfg.) NED;*

#### I.T. Manager (Jr. Scale)

Ms. Nuzhat Afreen  
MCIT





## 2.2.14 Department of Chemical Engineering

### Chairperson

Prof. Dr. Inayatullah Memon

### Professor

Prof. Dr. Inayatullah Memon  
*B.E (Chemical), NEDUET*  
*Ph.D (Chemical), LEEDS, UK*

### Assistant Professors

1. Dr. Faizan Raza  
*B.E. (Chemical) UoK;*  
*Ph.D. (Fusion Chemical) Hanyang University, South Korea*
2. Mr. Rizwan Ahmed Qamar  
*B.Sc. (Chemical) BZU Multan; M.Engg. (Chemical) NED*
3. Mr. Sajid Muhsbat  
*B.E (Chemical), MUET; M.Engg. (Chemical), NED*  
*Ph. D. (Chemical) NED (In Progress)*
4. Mr. Saad Nadeem  
*B.E (Chemical), DCET; M.Engg (Chemical), NED*  
*Ph. D. (Chemical) Universiti Teknologi PETRONAS, Malaysia.*
5. Dr. Syed Ali Ammar Taqvi  
*B.E (Chemical), NED; M.E (Chemical), NED;*  
*Ph. D. (Chemical)*
6. Dr. Fahim Uddin  
*B.E (Chemical), NED; M.E (Chemical) NED;*  
*Ph. D. (Chemical)*

### Lecturers

1. Mr. Ahmed Ullah  
*B.E (Chemical), NED; M.E (Chemical) NED*
2. Ms. Hafsa Bano  
*B.E (Chemical), NED; M.E (Chemical) NED*
3. Ms. Zaha Naseem  
*B.E (Chemical), NED; M.E (Chemical) NED*
4. Mr. Abdul Sami  
*B.E (Chemical), DCET; M.E (Chemical) NED*
5. Mr. Muhammad Umair Shaikh  
*B.E (Chemical) MUET; M.E (Chemical) MUET*
6. Mr. Ibtihaj Khurram Faridi (*On study leave*)  
*B.E (Chemical) MUET; M.E (Chemical) Otto Von, Germany*
7. Syed Muhammad Tariq  
*B.E (Chemical) MUET; M.E (Chemical) NED*
8. Mr. Dileep Kumar  
*B.E (Chemical) MUET; M.E (Chemical) MUET*
9. Mr. Muhammad Shahid  
*B.E (Chemical) UoK; M.E (Chemical) NED*
10. Ms. Tuba Siraj Ansari  
*B.E (Chemical) NED; M.E (Chemical) NED*

### IT Manager (Senior Scale)

Ms. Nadia Aijaz  
*B.E (CIS) (NED); MCIT (NED)*

## 2.2.15 Department of Metallurgical Engineering

### Chairperson

Dr. Ali Dad Chandio

### Associate Professors

1. Dr. Ali Dad Chandio  
*B.E. (Metallurgy & Materials) MUET;*  
*M.E. (Materials Engg.) NED*  
*Ph.D. (High Temperature Materials for Aero-engine Applications) UK*
2. Dr. Shahid Hussain  
*B.E. (Metallurgy & Materials) MUET;*  
*M.Engg. (Materials) NED;*  
*Ph.D. (Nano and Functional Materials) South Korea*
3. Dr. Nafis-Ul- Haque  
*B.E. (Metallurgy & Materials) MUET;*  
*M.E. (Materials Engg.) NED;*  
*Ph.D. (Metallurgy & Materials Engg.) UK*

### Assistant Professors

1. Dr. Iftikhar Ahmed Channa (*On study Leave*)  
*B.E (Metallurgy & Materials) MUET*  
*M.E (Materials Engg.) NED; Ph.D. (In Progress)*

2. Engr. Aqeel Ahmed Shah  
*B.E. (Metallurgy & Materials) MUET;*  
*M.S. (Nano Materials) South Korea; Ph.D. (In progress)*
3. Dr.-Ing. Laraib Sarfraz Khanzada  
*B.E. (Metallurgy & Materials) MUET;*  
*M.E. (Materials Engg.) NED; Ph.D. (Materials Engg. Materials for Electronics & Energy Technologies)*
4. Engr. Muhammad Ali Siddiqui (*On study Leave*)  
*B.E. (Metallurgy & Materials) MUET;*  
*M.E. (Materials Engg.) NED*
5. Engr. Muhammad Samiuddin (*On study Leave*)  
*B.E. (Materials)NED; M.E. (Materials)NED*
6. Engr. Waseen Khan  
*B.E.(Metallurgical)NED; M.E. (Materials) NED;*  
*Ph.D. (In progress)*
7. Engr. Sajida Shaikh  
*B.E. (Materials)NED; M.E. (Materials)NED;*  
*Ph.D. (In progress)*
8. Dr. Muhammad Rizwan  
*B.E. (Materials)NED; M.E. (Materials) NED*  
*Ph.D. (Material Engg. Biomaterials) University of Malaysia, Malaysia*



## Lecturers

1. Engr. Zubia Anwer  
*B.E.(Metallurgical)NED; M.E. (Materials) NED;  
Ph.D. (In progress)*
2. Mr. Jahanzeb Bhatti  
*B.E. (Metallurgy & Materials) MUET;  
M.E. (Mechanical) University of Malaysia*

3. Mr. Hammad Ur Rehman  
*B.E. (Metallurgical) NED;  
M.E.M (Industrial Management) NED*

## IT Manager (Junior Scale)

Mr. Muhammad Imran  
*MCIT (NED); MCS. (FUUAST);  
PGD (CS) KU; DCS (AT & T)*

## 2.2.16 Department of Polymer & Petrochemical Engineering

### Chairperson

Prof. Dr. Kausar Ali Syed

### Professor

1. Prof. Dr. Kausar Ali Syed  
*Ph.D. (Polymer Science)  
University of Louis Pasteur, Strasbourg, France*
2. Prof. Dr. Zahoorul Hussain Awan  
*B.E. (Mechanical), NED; M.Engg. (Chemical), NED  
Ph. D. (Chemical), Chonbuk Uni, South Korea*

### Associate Professors

1. Dr. Saud Hashmi  
*Ph. D. (Chemical), Chonbuk Uni, South Korea*
2. Dr. Asim Mushtaq  
*B.E. (Chemical Engg.) NED; M.E. (Env. Engg.) NED;  
Ph.D. (Chemical Engg) Universiti Teknologi PETRONAS,  
Malaysia; Mem. PEC, PASSP*

### Assistant Professors

1. Engr. Raza Muhammad Khan  
*B.E. (Polymer Engg) Hamdard University;  
M.Sc. (Advanced Materials Engg); Uni of Bradford UK  
CEng MIMechE*
2. Dr. Rafiq Ahmed  
*Ph.D. (Polymer Tech.) Eindhoven University  
of Technology, The Netherlands*
3. Dr. Junaid Akhlaas  
*Ph.D(Chemical) University of Padua, Italy*

4. Engr. Nadia Khan  
*B.E.(Chemical) NED; M.E. (Chemical) NED*

### Lecturers

1. Engr. Asra Nafees  
*B.E.(Polymer & Petrochemical) NED; M.E. (Polymner) NED*
2. Engr. Amina Israr  
*B.E.(Polymer & Petrochemical) NED; M.E. (Ind. Mgm) NED*
3. Engr. Nabiha Syed  
*B.E.(Polymer & Petrochemical) NED; M.E. (Polymer) NED*
4. Engr. Ahmed Saleem  
*B.E.(Polymer & Petrochemical) NED;  
M.Sc. (Engg.) in Chemical and Energy Engineering  
Otto Von Vuericke University, Magdeburg, Germany*

### Laboratory Engineers

1. Engr. Zia-ul-Hassan  
*B.E.(Mechanical Engg.) NED*
2. Mr. Ali Raza  
*B.E.(Textile Engg.) MUET, Jamshoro;  
M.E.(Polymer Engg.) NED*
3. Mr. Umair Hasan  
*B.E.(Electronics Engg.) SSUET;  
M.E. (Electrical Engg.) The Arctic University of Norway*

### I.T. Manager

Engr. Nuzhat Afreen  
*BS(Computer Engg.) SSUET; MCIT (NED)*

## 2.2.17 Department of Food Engineering

*The Department is located in NED-LEJ Campus*

### Chairperson (Acting)

Prof. Dr. Zahoorul Hussain Awan

### Professors

Prof. Dr. Tariq Iqbal  
*Ph.D. (Process and Chemical Engineering)*

### Assistant Professors

1. Dr. Muhammad Badaruddin  
*M.Sc. (Food Science and Technology) UoK;  
Ph.D. (Biosciences) University of Exeter, UK*
2. Dr. Jawaad Ahmed Ansari  
*M.Sc. (Food Science and Technology) UoK;  
M.Phil. (Food Science and Technology) UoK;  
Ph.D. (Chemical and Materials Engg.)  
University of Auckland, New Zealand*
3. Ms. Alia  
*B.E. (Chemical) NED; M. Engg(Chemical) NED.*



4. Mr. Muhammad Hassam Siddiqui  
*B.E. (Chemical) DUET; M. Engg (Chemical) NED*

#### **Lecturers**

1. Ms. Farah Shamim  
*B.E. (Chemical) NED; M.Engg. (Chemical) NED*
2. Mr. Salman Ali  
*B.E. (Chemical Engg.) DUET; M.Sc. (Chemical & Energy Engg) Otto Von Guericke University Magdeburg, German*
3. Ms. Iqra Siddique Alvi  
*B.E. (Food) NED; MEM (NED)*

4. Ms. Aisha Jilani  
*B.E. (Mechanical) NUST; M.S. (Mechanical) NUST*

#### **Lab Engineer**

1. Mr. Owais Ahmed  
*B.S. (Food Science and Technology) UoK*
2. Ms. Fizza Zia Shaikh  
*B.E. (Biomedical) MUET*

### **2.2.18 Department of Environmental Engineering**

#### **Chairperson**

Dr. Atif Mustafa

#### **Professor**

Prof. Dr. Asif Ahmed Shaikh  
*B.E. (Civil) NED University;  
M. Engg. (Civil) Nagasaki University, Japan.  
Ph.D. (Civil/Environmental Engineering) Nagasaki University, Japan.*

3. Dr. Sadia Khan  
*M.Sc. (Microbiology) University of Karachi.  
M. Phil (Molecular Medicine) University of Karachi.  
Ph.D. (Civil & Environmental Engineering) University of Strathclyde Glasgow, U.K.*

#### **Assistant Professors**

1. Dr. Zuhaib Siddiqui (On Ex-Pakistan Leave)  
*B.E. (Civil) MUET, Jamshoro;  
M.E (Environmental Engg. & Management) Thailand.  
Ph.D. (Waste/Industrial Waste Treatment)  
University of Leeds, U.K.*
2. Dr. Abdul Ghaffar  
*B.S. (Microbiology) Sindh University.  
MEM (Environmental Management) NED University.  
Ph.D. (Environmental Science & Engineering)  
Tsinghua University, China*

#### **Associate Professors**

1. Dr. Atif Mustafa  
*B.E. (Civil) NED University;  
M. Engg. (Environmental Engineering) NED University.  
Ph.D. (Environmental Engineering) University of Edinburgh, U.K.*
2. Dr. Mehmood Ali  
*B.E. (Mechanical) NED University;  
M. Engg. (Environmental Engineering) NED UET.  
Ph.D. (Mechanical Engineering) Uni of Glasgow UK*

#### **IT Manager (Junior Scale)**

Mr. Farhan Ahmed  
*B.S. (Computer Science), SZABIST, Karachi.*

### **2.2.19 Department of Software Engineering**

#### **Chairperson (Acting)**

Prof. Dr. Najmi Ghani Haider

#### **Associate Professors**

1. Dr. Sh. Muhammad Wahabuddin Usmani  
*Diploma (Computer Science) SBTE;  
BE (Electronics); MSc (Comp. Sc.);  
PhD (Computer Science) NED*
2. Dr. Shehnaila Zardari  
*BE (Software); MUET Jamshoro  
ME (Communication Systems & Network) MUET  
Ph.D. (Birmingham) UK*
3. Dr. Raheela Asif  
*BE (Comp & Info. Sys), NED; MCIT (NED);  
MS (Software Engineering) SSUET;  
Ph.D. (Computer Science) NED*

#### **Assistant Professors**

1. Dr. Kashif Mehboob Khan  
*B.S (Comp Engg) SSUET; MCIT (NED); Ph.D.*
2. Dr. Maria Andaleeb Siddiqui  
*B.E. (Telecom) NED; M.E. (Comp. Sys) NED; Ph.D.*
3. Engr. Asma Khan  
*B.E (Comp. Sys.) MUET; M.E. (Info Tech) MUET*
4. Engr. Muhammad Faraz Hyder  
*B.E (Comp. & Info. Sys.) NED; M.E. (Telecom) NED;  
M.E. (Comp. Sys.) NED; Ph.D. (In Progress) NED*
5. Engr. Mustafa Latif  
*B.E (Comp. & Info. Sys.) NED; M.E. (Comp. Sys.) NED;  
Ph.D. (In Progress) NED*





6. Engr. Shumaila Ashfaq  
*B.E. (Comp & Info. Sys) NED; M.E. (Comp. Sys.) NED*
7. Engr. Simra Najm  
*B.E. (Comp & Info. Sys) NED; M.E. (Comp. Sys.) NED*

#### Lecturers

1. Engr. Uzma Zehra  
*B.E. (Comp & Info Sys) NED; M.S. (Comp. Sc.) IBA;*
2. Engr. Sidra Masood  
*B.E. (Software) MUET; M.E. (Comp. Sys & Networks) MUET;*

3. Engr. Muhammad Sheraz  
*B.E. (Comp. & Info. Sys) NED; M.E. (Com. Sys) NED;  
Ph.D. (In Progress) NED*
4. Engr. Sana Fatima  
*B.E. (Comp. & Info. Sys) NED; MS (CSIT) NED;*
5. Engr. Zainab Fatima  
*B.E. (Comp. & Info. Sys) NED; ME (Comp. Sys) NED;*

#### IT Managers (Junior Scale)

Mr. Muhammad Imran Shaikh  
*MCS (KU); MCSE; CCNA; MCSA; MCIT (NED)*

### 2.2.20 Department of Computer Science and Information Technology

#### Chairperson

Prof. Dr. Najmi Ghani Haider

#### Professors

Prof. Dr. Najmi Ghani Haider  
*B.Sc. (Hons) Electronic Engineering  
(Hull, UK); Ph.D. (Brunel, UK)*

#### Associate Professors

1. Dr. Najeed Ahmed Khan  
*MSc (Maths,) (Gold Medal);  
MSc (Computer Science); Ph.D. (Leeds, UK)*
2. Dr. Muhammad Mubashir Khan  
*MSc (Telecom), Sindh; MCIT (by Research) NED  
Ph.D. (Leeds, UK)*
3. Dr. Saman Hina  
*BS (Comp. Sc.), SSUET; MCIT (NED)  
Ph.D. (Leeds, UK)*
4. Dr. Shariq Mahmood Khan  
*BCIT (NED); MCIT (NED); Ph.D. (Brunel, UK)*

#### Assistant Professors

1. Ms. Saba Izhar Haque  
*BSc (Hons) UMIST, UK; M Phil (Computation); UMIST, UK*
2. Mr. Wasimullah  
*BCIT (NED); MCIT (NED); Ph.D. (In Progress) NED*
3. Mr. Muhammad Umer Farooq  
*BCIT (NED); MCIT (NED); Ph.D. (In Progress) NED*

#### Lecturers

Mr. Abdul Karim Kazi  
*BCS (KU); MCS (KU); MCIT (NED);  
Ph.D. (In Progress) NED*

#### IT Managers (Senior Scale)

Ms. Noor Afshan  
*B.S. (Comp. Info. Sys) USA*

#### IT Managers (Junior Scale)

Ms. Nazish Irfan  
*MS (IT) PIMSAT*

### 2.2.21 Department of Mathematics

*(Administering Bachelor of Science in Computational Finance Programme)*

#### Chairperson

Prof. Dr. Mirza Mahmood Baig

#### Professor

Prof. Dr. Mirza Mahmood Baig  
*M.Sc. (Mathematics) (UoK); MS (Comp Sc.) NEDUET;  
Ph.D (Comp Sc.) NED*

#### Assistant Professors

1. Mr. Umar Faryaz  
*B.Sc. (Hons) UoK; M.Sc. (Mathematics) UoK;  
MS (Comp Sc.) NED*

2. Mr. Javed Ahmed Siddiqui  
*B.Sc. (Hons) (UoK); M.Sc. (Mathematics) (UoK)*
3. Dr. Mushtaque Hussain  
*M.Sc. (Mathematics) (QAU Islamabad); PGD (Comp Sc.) (UoK)  
Ph.D. (Linkoping University, Sweden)*
4. Mrs. Razia Shaheen  
*B.Sc. (Hons) UoK; M.Sc. (Mathematics) UoK; M Phil UoK*
5. Dr. Muhammad Jamil  
*B.Sc. (Hons) UoK; M.Sc. (Mathematics) UoK;  
M.Phil (Mathematics) UoK; Ph.D. (Mathematics) G.C. Uni Lahore*



6. Dr. Fareed Ahmad  
*B.Sc.(Hons) UoK; M.Sc. (Mathematics) UoK;  
MS(Comp Sc.) NED; Ph.D. (Comp. Sc) NED*
7. Dr. Azam Khan  
*M.Sc. (Mathematics) UoK; Ph.D. (Linkoping Uni, Sweden)*
8. Mrs. Shumaila Usman  
*B.Sc.(Hons) UoK; M.Sc. (Statistics) UoK; MCIT (NED)*
9. Dr. Fahim Raees  
*B.Sc. (Hons) UoK; M.Sc. (Mathematics) UoK  
Ph.D. (Computational Fluid Dynamics)  
TU Delft, The Netherlands*
10. Dr. Kamran Zakaria  
*M.Sc. (IBM) UoK; (DAE CS); (DAE Java program)  
Ph.D. (Mathematics) FUUAST*
11. Dr. Faqiha Sultan  
*B.Sc. (Hons) UoK; M.Sc.(Applied Mathematics) UoK;  
Ph.D. (Mathematics) UoK*
12. Mr. Zakir Hussain Khan  
*B.Sc. (Hons) UoK; M.Sc. (Statistics) UoK  
MS. (Applied Mathematics) NED*
13. Syed Tauqeer Ahmed Hashmi  
*B.Sc. (Hons) UoK; M.Sc. (Statistics) UoK  
MS (Applied Mathematics) NED*
14. Mr. Sohail Ahmed  
*B.Sc. (Hons) UoK; M.Sc. (Statistics) UoK  
MS. (Applied Mathematics) NED*
15. Dr. Saima Gul  
*M.Sc. (Mathematics) UoK;  
Ph.D. (Mathematics) Massey University Newzealand*
16. Dr. Muhammad Yousuf Tufail  
*B.Sc. (Hons) (Mathematics) UoK; M.Sc. (Mathematics) UoK  
Ph.D. (Mathematics) Massey University Newzealand*
2. Mr. Muhammad Samad Khan  
*B.E. (Electrical) NED; MS (Applied Mathematics) NED*
3. Mr. Sami Ullah Qureshi  
*B.S. (Economics) UoK; M.Phil (Applied Economics) UoK*
4. Ms. Ubaida Fatima  
*B.E (BME) NED; MS (Applied Mathematics) NED*
5. Ms. Saba Naz  
*M.Sc. (Mathematics) UoK; MS (Applied Mathematics) NED*
6. Ms. Uroosa Baig  
*B.S. (Mathematics) FUUAST; MS (Applied Mathematics) NED*
7. Ms. Shinza Jabeen  
*M.Sc. (Applied Mathematics) UoK;  
MS (Applied Mathematics) NED*
8. Ms. Onaiza Ali  
*B.S. (Applied Mathematics) UoK;  
MS (Applied Mathematics) NED*
9. Ms. Ammara Ashraf  
*M.Sc. (Mathematics) UoK;  
MS (Applied Mathematics) NED*
10. Ms. Sidra Raees  
*M.Sc. (Mathematics) UoK;  
MS (Applied Mathematics) NED*
11. Ms. Umm-e-Ammarah  
*M.Sc. (Mathematics) UoK;  
MS (Applied Mathematics) NED*
12. Mr. Haris Ur Rehman Horani  
*M.Sc. , M.B.A.*
13. Mr. Muhammad Amin  
*M.B.A.*
14. Ms. Komal Batool  
*B.S. (CF) NED; MS (Data Engineering) NED*

#### **Lecturers**

1. Mr. Yasir Hussain Khan  
*B.S. (Mathematics) FUUAST; MS (Applied Mathematics) NED*

### **2.2.22 Department of Physics**

*(Administering Bachelor of Science in Applied Physics Programme)*

#### **Chairperson**

Dr. Irfan Ahmed

#### **Associate Professor**

Dr. Irfan Ahmed  
*B.E.(Electrical) NED; M.Engg (Electrical) NED;  
Ph.D. (Electrical) Michigan Tech., USA*

#### **Assistant Professors**

1. Mr. Tahir Jamal  
*B.Sc. (Hons) UoK; M.Sc. (Phy) UoK;  
M.Phil. (Phy) FUUAST;*
2. Dr. Iqbal Tariq  
*B.Sc. (Hons) UoK; M.Sc. (Phy) UoK;  
Medical Physics (P.A.E.C. and D.N.S.R.P);  
Ph.D. (Medical Phy / Radiation Phy)*
3. Ms. Saba Javaid  
*B.Sc. (Hons) UoK; M.Sc. (Phy) UoK; MS UoK;  
Ph.D. (In Progress)*
4. Ms. Roohi Zafar  
*B.Sc. (Hons) UoK; M.Sc. (Phy) UoK; MS UoK;  
Ph.D. (In Progress)*
5. Mr. Junaid Karim Khan  
*B.Sc UoK; M.Sc. (Applied Physics) UoK;  
M.Phil (Renewable Energy) UoK; Ph.D. (In Progress)*
6. Ms. Hira Ashfaq Lodhi  
*M.Sc. (Applied Physics) UoK;  
MS (Applied Mathematics) NED; Ph.D. (In Progress)*
7. Dr. Uzair Majeed  
*Ph.D.. (Material Physics);*



### Lecturers

1. Mr. Ghulam Mustafa  
*B.Sc. (Hons) UoS; M.Sc. (Physics) UoS;  
M. Phil (Atomic/ Laser Spectroscopy) UoK;  
Ph.D. (In Progress)*
2. Mr. Danish Ahmed Khan  
*B.S. (Medical Physics) UoK  
M.Phil (Atomic/Laser Spectroscopy) UoK;*

3. Ms. Maria Arshad  
*B.Sc. (Hons) UoK; M.Sc. (Digital Electronics) UoK;  
MS (Physics) NEDUET; Ph.D. (In Progress)*
4. Hafiz Muhammad Usama Ayub  
*B.Sc. (Hons) UoK; M.Sc. (Applied Physics Electronics) UoK;  
MS (Physics) NEDUET; Ph.D. (In Progress)*
5. Ms. Ayesha Khurshid  
*B.Sc. UoK; M.Sc. (Applied Physics) UoK;  
MS (Physics) NEDUET;*

## 2.2.23 Department of Chemistry

*(Administering Bachelor of Science in Industrial Chemistry Programme)*

### Chairperson

Dr. Nuzhat Arshad

### Associate Professor

1. Dr. Nuzhat Arshad  
*B.Sc. UoK; M.Sc (Chem) UoK;  
Ph.D (Chemistry), Karl-Franzens University of Graz, Austria;*
2. Dr. Kashif Ahmed  
*M.Sc. (Chemistry) UoS; Ph.D. (FUUAST)*
3. Dr. Amtul Qayoom  
*M.Sc. (Chemistry) UoS; Ph.D UoK;*
4. Dr. Saeeda Nadir Ali  
*M.Sc. (Chemistry) UoK; Ph.D (Chemistry) UoK;*

3. Dr. Anjum Ayub  
*Ph.D. (Chemistry) UoK; M.Sc. (Analytical Chemistry) UoK;  
B.Sc. (Hons.) UoK; M.E. (Chemical) USA*
4. Dr. Shazia Perveen  
*Ph.D. (Chemistry) UoK; M.Sc. (Analytical Chemistry) UoK;  
B.Sc. (Hons.) UoK*
5. Dr. Rafia Usman  
*Ph.D. (Chemistry) Kagoshima University;  
M.S. (Chemistry) Murray State University, KY, USA;  
M.Sc. (Applied Chemistry) UoK; B.Sc. (Hons.) UoK*
6. Dr. Syed Farhan Hasany  
*Ph.D. (Chemistry Engineering) University of Malaysia;  
M.Sc. (Chemistry) UoK*

### Assistant Professors

1. Syed Ghazanfar Hussain  
*M.Sc.(Physical Chemistry) UoK;  
M.Phil; Ph.D. (In Progress)*
2. Mr. Muhammad Ansar Khan  
*B.Sc. (Hons.); M.S. (Applied Chemistry) UoK;  
M.E. (Chemical) USA*

### Lecturers

1. Ms. Hira Sultan  
*MS (Chemistry) Jinnah University for Women;*
2. Ms. Farhat Ikram  
*MS (Chemistry) NEDUET; Ph.D. (in Progress)*
3. Ms. Atia Shamim  
*M.Phil (Chemistry) ICCBS*

## 2.2.24 Department of Humanities

*(Administering Bachelor of Science in English Linguistics Programme)*

### Chairperson

Prof. Dr. Sajida Zaki

### Professor

Prof. Dr. Sajida Zaki  
*M.A. English (Linguistics), KU, Karachi;  
Ph.D. (Applied Linguistics), HU, Karachi*

2. Dr. Farooq Hassan  
*M.A. (Islamic Studies) KU; L.L.B. Karachi;  
Advanced Islamic Studies Course, Al-Azhar Uni, Egypt;  
Ph. D. (Islamic Studies) KU  
Post-Doc (Fulbright), Georgetown University, USA*

### Associate Professor

1. Dr. Abdul Hai Madni  
*M.A. (Islamic Studies) KU;  
M.A. (Islamic Studies) Medina Uni, K.S.A.;  
M.A. (Islamic Studies) Wifaq ul Madaris;  
L.L.B. KU; Fazail-e-Arabi KU; Ph.D. (Islamic Studies) I.U.B;  
Islamic Jurisprudence Course, I.I.U. Islamabad*

### Assistant Professors

1. Mr. Muhammad Ghaus Ali  
*M.A. (Pak. Studies) KU*
2. Ms. Farzana Shakoor  
*M.A. (Pak. Studies) KU; MS (Pak. Studies) KU*
3. Dr. Muhammad Bilal Usmani  
*M.A. (Islamic Studies), KU; Ph.D. (Islamic Studies) FUU, Karachi*



4. Dr. Imrana Begum  
*B.Ed. HU, Karachi; M.A. (General History), KU;  
M.I.T, Western International Uni, Khi;  
Ph.D. (European Studies) KU*
5. Dr. Muhammad Fareed  
*M.A. Eng.(Literature & Linguistics);  
M. Phil Edu.(English Language Teaching);  
Ph.D. Edu.(English Language Teaching)*
6. Dr. Natasha Memon  
*M.A. (English Literature) Sindh Uni;  
M.Sc. (Linguistics & English Languages) Uni of Edinburgh;  
Ph.D. (Linguistics & English Language), Uni of Edinburgh*
7. Ms. Almas Ashraf  
*M.A. English (Linguistics) JUW;  
M.S. (Applied Linguistics) NED;*
8. Ms. Rahila Huma Anwar  
*M.A. English (Linguistics) KU  
M. Phil (Applied Linguistics), HU, Khi  
Ph.D. (Applied Linguistics), NED (In Progress)*
9. Ms. Hina Manzoor  
*M.A. English (Linguistics), KU; M.S (Applied Linguistics), KU;  
Ph.D. (Applied Linguistics), SU (In Progress)*
10. Mr. Muhammad Asim Khan  
*M.A. Eng. (Literature & Linguistics) KU;  
MS (Applied Linguistics), KU;  
Ph.D. (Applied Linguistics), NED (In Progress)*

11. Dr. Rahat Rizvi  
*M.A. (Economics) KU; B.Ed., KU;  
M.A. (Political Sciences) KU; M.A. (Islamic Studies), KU;  
M. Phil Edu, (Islamic Studies), Iqra Karachi  
Ph.D. (Islamic Studies), Iqra, Karachi.*

#### **Lecturers**

1. Ms. Uzma Riyaz  
*M.A.Eng.(Literature & Linguistics) KU;  
M. Phil (Literature), KU (In Progress)*
2. Ms. Mahwish Arif  
*M.A. English (Literature & Linguistics), KU;  
M.S (Applied Linguistics), NED*
3. Ms. Hina Mohammad Ali  
*M.A. English (Literature & Linguistics), KU;  
M.S (Applied Linguistics), NED*
4. Ms. Asmara Shafqat  
*M.A. English (Linguistics), JUW;  
M.S (Applied Linguistics), NED;  
Ph.D. (Applied Linguistics) SU (In progress)*
5. Ms. Sidra Awan  
*M.A. English (Linguistics), JUW;  
M.S (Applied Linguistics), NED*
6. Ms. Maheen Tufail Dahraj  
*M.S.(Applied Linguistics)*

### **2.2.25 Department of Architecture and Planning**

*The Department is located in City Campus  
(Administering Bachelor of Science in Development Studies Programme)*

#### **Chairperson**

Prof. Dr. Anila Naeem

#### **Professors**

1. Prof. Dr. Noman Ahmed  
*B. Arch; M.C.P.;(METU, Turkey);  
Ph.D. (UK);MPCATP*
2. Prof. Dr. Anila Naeem  
*B. Arch; M.S. in Restoration Historic Preservation (METU, Turkey);  
Ph.D. (UK); MPCATP*

#### **Associate Professors**

Ms. Fariha Amjad Ubaid  
*B.Arch; MCPUD (METU, Turkey); MPCATP*

#### **Assistant Professors**

1. Ms. Fahmida Bano Sheikh  
*B.Arch; MURP; MPCATP*

2. Mr. Ravindar Kumar Ravi  
*B.Arch; MUD.; MPCATP*
3. Mr. Salman Manzoor Hasan  
*B.Arch; M.Arch; MPCATP*
4. Dr. Masooma Mohib Shakir  
*B.Arch; M.Arch (KU-Leuven,Belgium); MPCATP  
Ph.D. (Germany)*
5. Dr. Suneela Ahmed  
*B.Arch; MUM (Canberra, Australia); Ph.D.(UK); MPCATP*
6. Ms. Saadia Bano  
*B.Arch; MEM; MPCATP*
7. Dr. Saeed Ud Din Ahmed  
*B.Arch; MURP; Ph.D. (UK); MPCATP*
8. Ms. Rabela Junejo (On study leave)  
*B.Arch; M.S. (History of Architecture) METU, Turkey;  
MPCATP*





9. Ms. Farida Abdul Ghaffar  
*B.Arch; MURP; MPCATP*
10. Ms. Sarah Ather Khan  
*B.Arch; MURP; MPCATP*

#### Lecturers

1. Ms. Afsheen Sadaf (*On Study Leave*)  
*B.Arch; MURP; MPCATP*
2. Ms. Rabiya Asim  
*B.Arch; MURP; MPCATP*
3. Ms. Rahat Arsalan  
*B.Arch; MURP; MPCATP*

4. Ms. Safia Asif  
*B.Arch; MURP; MPCATP*
5. Syed Najia Zaidi (*On Study Leave*)  
*B.Arch; MURP; MPCATP*
6. Syed Fariha Tahseen  
*B.Arch; M. Arch (Lincoln UK)*
7. Ms. Tania Ali Soomro  
*B.Arch; MS in Conservation (KU - Leuven, Belgium) MPCATP*
8. Ms. Madiha Salam  
*B.Arch; M. Arch; MPCATP*
9. Ms. Madiha Arif (*Fine Arts*)  
*BFA (NCA Lahore)*
10. Mr. Mansoor Raza (*Development Studies*)  
*B.E. (Electrical) NED; M.Sc. (Env. Science) UoK*

### 2.2.26 Department of Economics and Management Sciences

(Administering Bachelor of Science in Economics & Finance and also administering Bachelor of Science in Management Sciences Programmes)

#### Chairperson

Prof. Dr. Raza Ali Khan

#### Professor

Prof. Dr. Raza Ali Khan  
*DAE (Civil) SEZIT; PGD (Public Administration) UoK;  
M.A. (International Relations) UoK;  
M.A. (Economics) UoK; M.S./M.Phil (Economics) SZABIST;  
Ph.D. (Construction Economics Management)  
Universiti Teknologi PETRONAS, Malaysia)*

#### Assistant Professor

1. Mirza Faizan Ahmed  
*MAS (Applied Economics) AERC-UoK;  
MBA (Finance) KUBS-UoK;  
Ph.D. (Behavioural Economics & Finance) AERC-UoK (In Progress)*
2. Dr. Muhammad Shahid Iqbal  
*PGD (Statistics) UoK; MA (Economics) UoK;  
MA (International Relations) UoK;  
M.S. / M.Phil (Applied Economics) AERC-UoK;  
Ph.D. (Economics) UoK*

#### Lecturer

1. Ms. Mahim Fatima  
*BS (Economics) UoK; MS (Economics & Finance) NED*
2. Mr. Farhan Ahmed  
*B.Com (SALU) CAT (ACCA-UoK); ACCA (P1) ACCA-UoK;  
M.A. (Economics) SALU; MBA (Finance) SZABIST;  
Ph.D. (Management Sciences) SZABIST (In Progress)*
3. Ms. Mariam Zehra  
*BBA (Finance) IoBM; MBA (Finance) IoBM*
4. Ms. Bariya Faizan  
*B.Com (SALU) CAT (ACCA-UoK); ACCA (P1) ACCA-UoK;  
M.A. (Economics) SALU; MBA (Finance) SZABIST;  
Ph.D. (Management Sciences) SZABIST (In Progress)*

### 2.2.27 Thar Institute of Engineering, Sciences and Technology (TIEST)

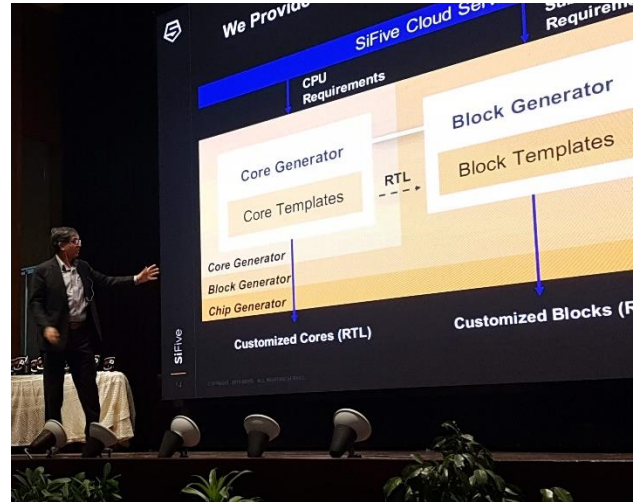
#### Professor

Prof. Dr. Mohammad Raza Mehdi  
*B.E. (Civil) NED; M.S. (Transportation);  
Ph.D. (Environmental Science)*

#### Lecturer

1. Engr. Vanesh Kumar  
*(ME, NED University Karachi)*
2. Ms. Farheen Mirza  
*(MS, NED University Karachi)*

1. Senior Faculty Members from Main Campus are also engaged conducting classes at TIEST.
2. More Faculty Members are being hired before the commencement of new Session.





# CHAPTER 3

## *Course of Studies*



Students admitted in this University are required to study all approved courses of the respective discipline. They are also needed to complete a course titled "Community Service (HS-200)" during the Four Years Studies.

Subject to changes and modifications by the University the courses of studies for Bachelors Degree programmes shall be as follows:

## **3.1 Bachelor of Engineering Programmes**

### **3.1.1 Civil Engineering**

#### **FIRST YEAR**

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CE-107	Engineering Drawing-I	1	2	3	CE-109	Engineering Surveying-I	2	1	3
CE-102	Statics and Dynamics	3	1	4	CE-110	Chemistry for Civil Engineers	1	1	2
CE-108	Engineering Materials	2	1	3	CE-111	Introduction to Computing for Civil Engineers	1	2	3
EE-123	Basic Electrical Engineering	2	0	2	ME-110	Basic Mechanical Engineering	2	0	2
MT-114	Calculus	3	0	3	HS-111	Functional English	2	0	2
HS-106	Pakistan Studies OR	1	0	1	MT-221	Linear Algebra & Ordinary Differential Equations	3	0	3
HS-127	Pakistan Studies (for Foreigners)				HSK-I	Chinese Language			NC

#### **SECOND YEAR**

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CE-201	Engineering Surveying-II	3	1	4	CE-222	Engineering Drawing-II	1	2	3
CE-205	Mechanics of Solids-I	3	1	4	CE-221	Structural Analysis-I	3	0	3
CE-220	Geology for Engineers	2	1	3	CE-219	Fluid Mechanics-I	3	1	4
HS-205	Islamic Studies OR	2	0	2	MT-331	Probability & Statistics	3	0	3
HS-209	Ethical Behaviour (for Non-Muslims)				HS-219	Professional Ethics	2	0	2
HS-218	Business Communication	2	1	3	CF-303	Applied Economics for Engineers	3	0	3
HSK-II	Chinese Language			NC					

#### **THIRD YEAR**

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CE-320	Reinforced Concrete Design-I	3	0	3	CE-302	Transportation Engineering-I	3	1	4
CE-321	Construction Engineering	3	0	3	CE-305	Soil Mechanics-I	3	1	4
CE-323	Quantity & Cost Estimation	3	0	3	CE-314	Structural Analysis-II	3	0	3
CE-319	Fluid Mechanics-II	3	1	4	CE-322	Mechanics of Solids-II	3	0	3
AR-309	Architecture and Town Planning	3	0	3	CE-424	Essentials in Construction Project	3	0	3
MT-443	Numerical Analysis	3	0	3		Management			





## FINAL YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CE-403	Soil Mechanics-II	3	1	4	CE-421	Design of Steel Structures	3	0	3
CE-432	Transportation Engineering-II	2	0	2	CE-####	Civil Engineering Elective			
CE-418	Hydraulic and Water Resources Engineering-I	3	1	4	CE-####	Management Sciences Elective			
CE-420	Reinforced Concrete Design-II	3	0	3	CE-####	Social Sciences Elective			
EN-301	Environmental Engineering-I	2	1	3	EN-401	Environmental Engineering-II	2	1	3
CE-409	Civil Engineering Project	0	3	3	CE-409	Civil Engineering Project	0	3	3
Civil Engineering Elective (to be chosen from the following)					Management Sciences Elective (to be chosen from the following)				
CE-419	Applied Hydraulics	3	0	3	CN-423	Management and marketing of Construction Services	3	0	3
CE-422	Structural Design & Drawing	3	0	3					
CE-423	Masonry Structures	3	0	3	CN-432	Leadership and Human Skills in Management	3	0	3
CE-426	Building Information Modeling	1	2	3					
CE-429	Geosynthetics and their Applications	3	0	3	CE-425	Modern Aspects of Construction Project Management	3	0	3
CE-431	Geoinformatics Applications	2	1	3					
CE-433	Coastal and Harbour Engineering	3	0	3	CE-434	Procurement Management	3	0	3
CE-438	Hydraulics and Water Resource Engineering-II	3	0	3	CE-435	Construction Contract Management	3	0	3
CN-424	Environmental Issues in Construction	3	0	3	Social Sciences Elective (to be chosen from the following)				
CN-430	Disaster and Reconstruction Management	3	0	3	CE-427	Introduction to Entrepreneurship & Opportunity Assessment	2	0	2

\* Duration one academic year: Requires literature survey and preliminary work during this Semester





### 3.1.2 Urban Engineering

#### FIRST YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit		Hours Total	Course Code	Course Title	Credit		Hours Total
		Th	Pr				Th	Pr	
UE-118	Engineering Surveying-I	3	1	4	UE-117	Engineering Drawing & Drafting-I	1	2	3
EE-123	Basic Electrical Engineering	2	0	2	UE-102	Statics and Dynamics	3	1	4
ME-110	Basic Mechanical Engineering	2	0	2	UE-104	Engineering Materials	3	1	4
MT-114	Calculus	3	0	3	HS-205	Islamic Studies OR	2	0	2
CY-110	Applied Chemistry for Engineers	2	1	3	HS-209	Ethical Behaviour (for Non-muslims)			
HS-106	Pakistan Studies OR	1	0	1	MT-221	Linear Algebra & Ordinary Differential Equations	3	0	3
HS-107	Pakistan Studies (for Foreigners)				HS-111	Functional English	2	0	2
					HSK-I	Chinese Language			NC

#### SECOND YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
UE-205	Engineering Drawing and Drafting-II	2	2	4	UE-213	Planning and Design of Transportation Systems	3	1	4
UE-212	Mechanics of Solids	3	1	4	UE-214	Fluid Mechanics	3	1	4
UE-215	Engineering Surveying-II	2	1	3	MT-229	Probability & Statistics	2	0	2
HS-304	Business Communication & Ethics	3	0	3	UE-218	Law and Regulatory Control Studies	2	0	2
AR-204	Urban Sociology	2	0	2	UE-209	Analysis of Structures	3	0	3
UE-114	Computing Tools and Applications	1	2	3	UE-216	Geology for Engineers	2	1	3
HSK-II	Chinese Language			NC					

#### THIRD YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
UE-321	Civil Works Quantity & Cost Estimations	1	2	3	UE-305	Soil Mechanics-I	3	1	4
UE-316	Traffic Engineering and Management	3	1	4	UE-306	Structural Analysis and Design	3	0	3
UE-322	Principles of Engineering Construction	3	0	3	UE-323	Urban Hydrology and Municipal Engineering	2	1	3
AR-308	Urban Infrastructure Planning & Management	2	0	2	CF-313	Applied Economics for Engineers	2	0	2
MT-443	Numerical Analysis	3	0	3	EN-301	Environmental Engineering-I	2	1	3
UE-304	Reinforced Concrete Design	3	1	4	UE-217	Introduction to Geo-Informatics	1	1	2

#### FINAL YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
UE-403	Soil Mechanics-II	3	1	4	UE-413	Mechanics & Design of Steel Structures	3	0	3
UE-405	Construction Planning and Management	3	0	3	UE-402	Urban Mass Transportation	2	0	2
UE-418	Hydraulic Engineering and Water Resources Management	2	1	3	CF-410	Financial Resource Management	2	0	2
UE-407	Advance Technologies and Disaster Management	2	0	2	EN-402	Environmental Impact Assessment	2	0	2
EN-401	Environmental Engineering-II	2	1	3	##-###	Inter-Disciplinary Elective	2	1	3
UE-415	*Urban Engineering Project	0	3	3					

#### Inter-Disciplinary Elective (to be chosen from the following)

UE-421	Modern Aspects of Construction Project Management	2	1	3	UE-425	Applications in City and Regional Planning	2	1
UE-422	Traffic Impact Studies	2	1	3	UE-426	Geosynthetics and their applications	3	0
UE-423	Highway and Airfield Pavement Design	2	1	3	UE-427	Procurement Management	3	0
UE-424	Building Information Modeling	2	1	3	CE-419	Applied Hydraulics	3	0
					CE-423	Masonry Structures	3	0

**\* Duration one academic year: Requires literature survey and preliminary work during this Semester**



### 3.1.3 Petroleum Engineering

#### FIRST YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
PE-101	Fundamentals of Petroleum Engineering	2	0	2	PE-102	Engineering Geosciences	2	1	3
EE-116	Principles of Electrical Engineering	3	1	4	ME-101	Engineering Mechanics	3	1	4
CE-105	Engineering Surveying	3	1	4	ME-102	Engineering Drawing	3	1	4
CY-109	Applied Chemistry	3	1	4	PH-122	Applied Physics	3	1	4
MT-114	Calculus	3	0	3	HS-104	Functional English	3	0	3
HS-105	Pakistan Studies OR	2	0	2	HSK-I	Chinese Language			NC
HS-127	Pakistan Studies (for Foreigners)								

#### SECOND YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MT-221	Linear Algebra & Ordinary Differential Equations	3	0	3	PE-205	Computer Programming & Application	2	1	3
PE-202	Petroleum Geology	2	1	3	CE-212	Mechanics of Solids	3	1	4
PE-203	Reservoir Petrophysics	2	1	3	CH-207	Fluid Mechanics-II	3	1	4
CE-215	Fluid Mechanics	3	1	4	PE-207	Drilling Engineering-I	2	1	3
PE-206	Thermodynamics – I	2	1	3	MT-331	Probability & Statistics	3	0	3
HS-205	Islamic Studies OR	2	0	2					
HS-209	Ethical Behaviour								
HSK-II	Chinese Language			NC					

#### THIRD YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
PE-302	Reservoir Fluid Properties	2	1	3	PE-312	Drilling Engineering-II	2	1	3
PE-313	Structural Geology & Geophysical Exploration	2	1	3	PE-308	Petroleum Production Economics	2	0	2
PE-306	Subsurface Production Engineering	2	0	2	PE-304	Reservoir Engineering – I	3	1	4
PE-310	Natural Gas Engineering	2	1	3	PE-311	Fundamentals of Well Logging	2	1	3
EL-305	Instrumentation & Control	3	1	4	MT-471	Applied Numerical Methods	2	1	3
HS-304	Business Communication and Ethics	3	0	3					

#### FINAL YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
PE-401	Reservoir Simulation	3	1	4	PE-413	Oil and Gas Field Production Facilities	3	1	4
PE-402	Reservoir Engineering-II	2	1	3	PE-414	Water Flooding and Introduction to	3	1	4
PE-408	Well Testing	3	1	4		Enhanced Oil Recovery			
PE-412	Introduction to Unconventional Oil, Gas & Energy Resources	2	0	2	PE-406	Petroleum Refinery Engineering	2	1	3
PE-411	Project Planning & Management	2	0	2	PE-407	Petroleum Property Env. & Safety Management	2	0	2
PE-410	*Petroleum Engineering Project	0	3	3	PE-410	Petroleum Engineering Project	0	3	3

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.4 Civil Engineering (Specialization in Construction)

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CE-107	Engineering Drawing-I	1 2 3	CE-109	Engineering Surveying-I	2 1 3
CE-102	Statics and Dynamics	3 1 4	CE-110	Chemistry for Civil Engineers	1 1 2
EE-123	Basic Electrical Engineering	2 0 2	CE-111	Introduction to Computing for Civil Engineers	1 2 3
CE-108	Engineering Materials	2 1 3	ME-110	Basic Mechanical Engineering	2 0 2
MT-114	Calculus	3 0 3	HS-111	Functional English	2 0 2
HS-106	Pakistan Studies OR	1 0 1	MT-221	Linear Algebra & Ordinary Differential Equations	3 0 3
HS-127	Pakistan Studies (for foreigners)		HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CE-201	Engineering Surveying-II	3 1 4	CE-222	Engineering Drawing-II	1 2 3
CE-205	Mechanics of Solids-I	3 1 4	CE-221	Structural Analysis-I	3 0 3
CE-220	Geology for Engineers	2 1 3	CE-219	Fluid Mechanics-I	3 1 4
HS-205	Islamic Studies OR	2 0 2	MT-331	Probability & Statistics	3 0 3
HS-209	Ethical Behaviour (for Non-Muslims)		HS-219	Professional Ethics	2 0 2
HS-218	Business Communication	2 1 3	CN-223	Fundamentals of Applied Economics for Engineers	3 0 3
HSK-II	Chinese Language	NC			

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CE-320	Reinforced Concrete Design-I	3 0 3	CE-302	Transportation Engineering-I	3 1 4
CE-321	Construction Engineering	3 0 3	CE-305	Soil Mechanics-I	3 1 4
CE-323	Quantity & Cost Estimation	3 0 3	CN-331	Construction Jobsite Engineering and Management	3 0 3
CN-323	Construction Contracts	3 0 3			
AR-309	Architecture and Town Planning	3 0 3	CN-333	Construction Economic Analysis	2 0 2
CN-336	Accounting and Financial Management	3 0 3	CN-433	Introduction to Entrepreneurship and Opportunity Assessment	2 0 2

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CN-428	Sustainable Construction	3 0 3	CE-###	Civil Engineering Elective	
CN-435	Systems in Building Construction	3 0 3	CN-429	Building Information Modeling	1 2 3
CE-418	Hydraulics and Water Resources Engineering-I	3 1 4	CN-427	Quality and Safety Aspects in Construction Engineering	2 0 2
CN-416	Legal and Regulatory Environment in the Construction Industry	3 0 3	CN-434	Temporary Structures in Construction	3 0 3
EN-301	Environmental Engineering-I	2 1 3	CN-436	Heavy Construction Equipment and Operations	3 0 3
CE-409	Civil Engineering Project	0 3 3	CE-409	Civil Engineering Project	0 3 3

#### Civil Engineering Elective (to be chosen from the following)

CE-419	Applied Hydraulics	3 0 3	CE-433	Coastal and Harbour Engineering	3 0 3
CE-422	Structural Design & Drawing	3 0 3	CE-438	Hydraulics and Water Resource Engineering-II	3 0 3
CE-423	Masonry Structures	3 0 3	CN-424	Environmental Issues in Construction	3 0 3
CE-429	Geosynthetics and their Applications	3 0 3	CN-430	Disaster and Reconstruction Management	3 0 3
CE-431	Geoinformatics Applications	2 1 3			

\* Duration one academic year: Requires literature survey and preliminary work during this Semester





### 3.1.5 Mechanical Engineering

#### FIRST YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CY-111	Applied Chemistry	2	0	2	PH-112	Applied Physics	2	1	3
MT-114	Calculus	3	0	3	HS-111	Functional English	2	0	2
EE-124	Basic Electricity and Electronics	2	1	3	ME-112	Thermodynamics	3	0	3
ME-111	Engineering Drawing	2	1	3	ME-104	Workshop Practice	0	2	2
HS-105	Pakistan Studies OR	2	0	2	ME-115	Statics	3	0	3
HS-127	Pakistan Studies (for Foreigners)				ME-214	Computer Programming & Applications	2	1	3
ME-113	Computer Aided Drawing	0	1	1	HSK-1	Chinese Language-I			NC
HS-200	Community Service			NC					

#### SECOND YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit		Hours Total	Course Code	Course Title	Credit		Hours Total
		Th	Pr				Th	Pr	
MT-223	Ordinary Differential Equations & Fourier Series	3	0	3	MT-330	Applied Probability & Statistics	2	1	3
ME-221	Fluid Mechanics – I	3	0	3	ME-218	Solid Mechanics - I	3	0	3
ME-222	Dynamics	3	0	3	ME-209	Materials & Metallurgy	3	1	4
ME-223	Engineering Mechanics Lab	0	1	1	HS-205	Islamic Studies OR	2	0	2
ME-224	Internal Combustion Engines	3	0	3	HS-209	Ethical Behaviour			
ME-220	Manufacturing Processes - I	3	1	4	ME-219	Mechanics of Machine	3	0	3
HSK-2	Chinese Language-II			NC	HS-208	Business Communication & Ethics	3	0	3

#### THIRD YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit		Hours Total	Course Code	Course Title	Credit		Hours Total
		Th	Pr				Th	Pr	
ME-317	Manufacturing Processes - II	3	1	4	MT-332	Advanced Calculus & Linear Algebra	3	0	3
ME-321	Power Plant Engineering	3	0	3	EL-305	Instrumentation and Control	3	1	4
ME-322	IC Engine and Power Plant Lab	0	1	1	ME-323	Machine Design	3	0	3
ME-302	Solid Mechanics - II	3	1	4	ME-318	Heat & Mass Transfer	3	0	3
ME-316	Fluid Mechanics-II	3	1	4	ME-319	Refrigeration & Air Conditioning	3	0	3
HS-###	Social Science (Elective)	2	0	2	ME-320	RAC and Heat Transfer Lab	0	1	1

#### FINAL YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MF-303	Applied Economics for Engineers	3	0	3	MG-481	Entrepreneurship	3	0	3
ME-436	Mechanical Vibrations	3	0	3	MT-441	Advanced Mathematical Techniques	3	0	3
ME-437	Machine Design and Vibration Lab	0	1	1	ME-417	Compressible Flow and Propulsion Systems	3	0	3
ME-419	Stress Analysis	3	0	3	ME-409	Mechanical Engineering Project	0	3	3
ME-409	*Mechanical Engineering Project	0	3	3	ME-435	Operations Management	3	0	3
ME-###	Management Elective				ME-###	Technical Elective 2			
ME-###	Technical Elective 1								

##### Technical Elective (to be chosen from the following)

ME-421	Gas Turbines	3	0	3
ME-422	Nuclear Power	3	0	3
ME-423	Computer Aided Design/ Computer Aided Manufacturing	2	1	3
ME-424	Clean Energy Technology	3	0	3
ME-425	Finite Element Analysis	2	1	3
ME-426	Plant Maintenance	3	0	3
ME-429	Water Treatment & Desalination	3	0	3
ME-430	Mechatronics	2	1	3
ME-431	Tribology	3	0	3

##### Management Elective (to be chosen from the following)

ME-432	Health, Safety & Environment	2	0	2
ME-433	Law for Engineers	2	0	2
ME-434	Total Quality Management	2	0	2

##### Social Sciences Elective (to be chosen from the following)

HS-219	Professional Ethics	2	0	2
HS-228	Sociology & Development	2	0	2
HS-229	Anthropology	2	0	2
HS-230	Organizational Behaviour	2	0	2

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.6 Textile Engineering

#### FIRST YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
TE-113	Introduction to Textile Engineering	2	0	2	TE-111	Textile Chemistry	3	1	4
PH-122	Applied Physics	3	1	4	ME-112	Thermodynamics	3	0	3
ME-111	Engineering Drawing	2	1	3	ME-104	Workshop Practice	0	2	2
MT-114	Calculus	3	0	3	EE-122	Basic Electricity & Electronics	3	0	3
HS-105	Pakistan Studies OR	2	0	2	ME-101	Engineering Mechanics	3	1	4
HS-127	Pakistan Studies (for Foreigner)				TE-224	Polymer & Fiber Science	2	0	2
HS-114	Functional English	2	0	2	HSK-I	Chinese Language			NC

#### SECOND YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MM-205	Mechanics of Material	3	1	4	TE-211	Textile Yarn Manufacturing	3	1	4
TE-208	Material Science	2	1	3	TE-205	Pre-treatment of Textile	3	1	4
TE-203	Computer Programming & Application	2	1	3	TE-207	Machine Design	3	0	3
TE-206	Fluid Mechanics for Textiles	2	1	3	ME-311	Manufacturing Processes	3	1	4
MT-225	Linear Algebra & Ordinary Differential Equations	3	0	3	HS-205	Islamic Studies OR	2	0	2
HSK-II	Chinese Language			NC	HS-209	Ethical Behaviour			

#### THIRD YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
TE-312	Textile Fabric Manufacturing Processes	3	1	4	*TE-424	Textile Printing	3	1	4
TE-307	Utilities for Textile Industry	3	1	4	TE-313	Textile Product Evaluation-I	3	1	4
MF-303	Applied Economics for Engineers	3	0	3	TE-319	Heat & Mass Transfer	2	1	3
TE-326	Textile Dyeing	3	1	4	TE-318	Textile & Environment	2	0	2
HS-304	Business Communication & Ethics	3	0	3	TE-305	Quality Control in Textiles	2	0	2
					MT-333	Advanced Calculus & Fourier Analysis	3	0	3

#### FINAL YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
HS-405	Organizational Behavior	3	0	3	HS-403	Entrepreneurship	3	0	3
TE-462	Advanced Fabric Manufacturing Mechanism	3	1	4	TE-451	Automation & Control in Textiles	3	0	3
TE-###	Elective	3	1	4	TE-###	Elective	3	0	3
TE-408	Textile Engineering Design Project	0	3	3	TE-408	Textile Engineering Design Project	0	3	3
TE-413	Textile Product Evaluation-II	3	1	4	TE-453	Garment Manufacturing	3	0	3

#### Inter-Disciplinary Elective (to be chosen from the following)

#### Inter-Disciplinary Elective (to be chosen from the following)

TE-461	Advanced Yarn Manufacturing Mechanism
TE-452	Textile Finishing

TE-406	Textile Production Management
TE-454	Textile Merchandising & Management

*\* Duration one academic year: Requires literature survey and preliminary work during this Semester*



### 3.1.7 Industrial and Manufacturing Engineering

#### FIRST YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MT-114	Calculus	3	0	3	PH-122	Applied Physics	3	1	4
ME-101	Engineering Mechanics	3	1	4	HS-111	Functional English	2	0	2
EE-122	Basic Electricity and Electronics	3	0	3	ME-111	Engineering Drawing	2	1	3
ME-104	Workshop Practice	0	2	2	IM-101	Computer Applications in Engineering	2	1	3
HS-105	Pakistan Studies OR	2	0	2	IM-105	Thermofluids	3	1	4
HS-127	Pakistan Studies for Foreigners				HSK-I	Chinese Language			NC

#### SECOND YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
IM-208	Materials Engineering	3	1	4	MT-225	Linear Algebra & Ordinary Differential Equations	3	0	3
IM-209	Mechanics of Materials	3	1	4	MF-303	Applied Economics for Engineers	3	0	3
IM-203	Manufacturing Processes	3	1	4	IM-211	Machine Design	3	1	4
MT-252	Introduction to Probability and Statistics	3	1	4	IM-212	Computer Aided Engineering Design	2	1	3
HS-205	Islamic Studies OR	2	0	2	IM-213	Metrology and Quality Control	3	1	4
HS-209	Ethical Behaviour								
HSK-II	Chinese Language			NC					

#### THIRD YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
HS-304	Business Communication & Ethics	3	0	3	IM-308	Operations Research	3	1	4
IM-303	Production Management	3	1	4	IM-307	Advanced Manufacturing Processes	3	1	4
MT-333	Advanced Calculus & Fourier Analysis	3	0	3	IM-408	Automation & Robotics	3	1	4
IM-312	Applied Thermo Fluids	3	1	4	IM-411	Methods Engineering	2	1	3
IM-310	Tool Design	3	1	4	IM-320	Modeling and Simulation	2	1	3

#### FINAL YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
IM-405	Finite Element Analysis	3	1	3	HS-403	Entrepreneurship	3	0	3
IM-402	Computer Aided Manufacturing	3	1	4	IM-417	Health, Safety & Environment	2	1	3
MG-450	Principles of Supply Chain Management	3	0	3	MT-441	Advanced Mathematical Techniques	3	0	3
IM-##	Elective Course	3	1	4	IM-413	Plant Engineering	3	1	4
IM-409	*Manufacturing Engineering Project	0	3	3	IM-409	Manufacturing Engineering Project	0	3	3

#### Elective Courses (to be chosen from the following)

- IM-416 Management Information System
- IM-418 Condition Monitoring
- IM-419 Project Management

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.8 Automotive Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
PH-122	Applied Physics	3 1 4	ME-106	Statistics	2 1 3
AU-113	Introduction to Automotive Systems	2 0 2	ME-112	Thermodynamics	3 0 3
HS-104	Functional English	3 0 3	AU-112	Engineering Drawing and Computer Graphics	2 1 3
MT-114	Calculus	3 0 3	EE-118	Basic Electricity and Electronics	3 1 4
HS-105	Pakistan Studies OR	2 0 2	CY-109	Applied Chemistry	3 1 4
HS-127	Pakistan Studies (for Foreigner)		HSK-I	Chinese Language	NC
ME-104	Workshop Practice	0 2 2			

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
AU-201	Automotive Power Plants	3 1 4	ME-213	Dynamics	2 1 3
AU-212	Computer Programming and Applications	2 1 3	ME-202	Solid Mechanics-I	3 1 4
AU-225	Fundamentals of Analogue and Digital Electronics	2 1 3	AU-231	Manufacturing Engineering-I	3 0 3
MT-223	Ordinary Differential Equations & Fourier Series	3 0 3	AU-222	Automobile Instrumentation	2 1 3
ME-209	Materials & Metallurgy	3 1 4	ME-204	Fluid Mechanics-I	3 1 4
AU-203	Statistics & Quality Control	3 0 3	HS-205	Islamic Studies OR	2 0 2
HSK-II	Chinese Language	NC	HS-209	Ethical Behaviour (for Non-Muslims)	

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
AU-313	Combustion, Emission and Pollution	3 0 3	AU-315	Design of Machine Elements	3 0 3
AU-311	Manufacturing Engineering-II	3 1 4	MT-471	Applied Numerical Methods	2 1 3
ME-313	Solid Mechanics-II	3 0 3	ME-314	Fluid Mechanics-II	3 0 3
MT-332	Advanced Calculus & Linear Algebra	3 0 3	ME-306	Mechanical Vibrations	3 1 4
HS-304	Business Communication & Ethics	3 0 3	MF-303	Applied Economics for Engineers	3 0 3
AU-314	Vehicle Dynamics	2 0 2			

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
AU-415	Vehicle Design	2 0 2	AU-415	Vehicle Design	2 0 2
AU-416	Mechatronics	3 1 4	AU-416	Mechatronics	3 1 4
AU-###	Elective Course	3 0 3	AU-###	Elective Course	3 0 3
ME-315	Heat & Mass Transfer	3 1 4	ME-315	Heat & Mass Transfer	3 1 4
AU-442	FEM and FVM: Applications in Automotive Engineering	2 1 3	AU-442	FEM and FVM: Applications in Automotive Engineering	2 1 3
AU-499	Automotive Engineering Project	0 3 3			

#### Inter-Disciplinary Elective (to be chosen from the following)

- AU-423 Body Engineering and Automotive Structure
- AU-433 Automotive Health Safety and Environment
- AU-444 Hybrid Vehicles & Drives
- AU-417 Automotive Paints and Coatings

*\* Duration one academic year: Requires literature survey and preliminary work during this Semester*





### 3.1.9 Electrical Engineering

#### FIRST YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EE-125	Basic Electrical Engineering	3	1	4	EE-156	Engineering Drawing	0	2	2
PH-122	Applied Physics	3	1	4	EE-126	Circuit Analysis	3	1	4
HS-114	Functional English	3	0	3	MT-227	Differential Equation	3	0	3
ME-107	Basic Mechanical Engineering	3	1	4	CE-109	Engineering Surveying-I	2	1	3
MT-114	Calculus	3	0	3	EE-163	Computer and Programming	3	1	4
					HS-105	Pakistan Studies OR	2	0	2
					HS-127	Pakistan Studies (For Foreigners)			
					HSK-I	Chinese Language			NC

#### SECOND YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EL-240	Electronic Devices & Circuits	3	1	4	EE-382	Electromagnetic Fields	2	0	2
EE-264	Data Structures and Algorithms	2	1	3	EE-223	Instrumentation and Measurement	2	1	3
MT-272	Linear Algebra & Geometry	3	0	3	EE-231	Signals and Systems	3	1	4
MT-226	Multi Variable Calculus	3	0	3	CS-205	Logic Design & Switching Theory	3	1	4
HS-214	Academic Writing	3	0	3	MT-331	Probability and Statistics	3	0	3
HS-205	Islamic Studies OR	2	0	2					
HS-209	Ethical Behaviour								
HSK-II	Chinese Language			NC					

#### THIRD YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EE-345	Electrical Machines	3	1	4	EE-362	Power System Analysis	3	1	4
EE-394	Digital Signal Processing	2	1	3	EE-352	Electrical Power Transmission	3	0	3
EE-359	Electrical Power Distribution and Utilization	3	1	4	EE-374	Feedback Control Systems	3	1	4
EL-343	Power Electronics	3	1	4	TC-307	Communication Systems	3	1	4
MT-471	Applied Numerical Methods	2	1	3	HS-304	Business Communication & Ethics	3	0	3

#### FINAL YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EE-457	Electrical Power System Protection	3	1	4	HS-405	Organizational Behavior	3	0	3
EE-411	Power Generation	3	0	3	HS-403	Entrepreneurship	2	0	2
CS-430	Microprocessor Programming & Interfacing	3	1	4	EE-412	Alternate Energy Systems	3	0	3
EF-304	Occupational Safety and Health	2	0	2	CS-418	Computer Communication Networks	2	1	3
EF-305	Engineering Economics & Management	3	0	3	EE-401	Electrical Engineering Project	0	3	3
EE-401	*Electrical Engineering Project	0	3	3					

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.10 Computer Systems Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CS-114	Fundamentals of Computer Engineering	3 1 4	EL-103	Basic Electronics	3 1 4
EE-120	Basic Electrical Engineering	3 1 4	CS-116	Object Oriented Programming	3 1 4
HS-111	Functional English	2 0 2	PH-122	Applied Physics	3 1 4
CS-115	Computer Programming	3 1 4	CS-117	Discrete Structures	3 0 3
HS-106	Pakistan Studies OR	1 0 1	HS-205	Islamic Studies OR	2 0 2
HS-107	Pakistan Studies (For Foreigners)		HS-209	Ethical Behaviour	
MT-114	Calculus	3 0 3	HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CS-220	Digital Logic Design	3 1 4	CS-221	Computer Organization & Design	3 1 4
MT-224	Complex Variable & Fourier Analysis	3 0 3	CS-215	Signals and Systems	2 1 3
EE-217	Circuit Theory	2 0 2	CS-222	Database Management Systems	3 1 4
CS-218	Data Structure & Algorithms	3 1 4	MT-222	Linear Algebra & Ordinary Differential Equation	3 0 3
HS-218	Business Communication	2 1 3	HS-219	Professional Ethics	2 0 2
CS-219	Computer Engineering Workshop	0 1 1			
HSK-II	Chinese Language	NC			

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-335	Probability and Statistics	3 0 3	CS-329	Operating Systems	3 1 4
CS-326	Software Engineering	3 1 4	CS-301	Microprocessor Based System Design	3 1 4
CS-327	Computer Communication Networks	3 1 4	CS-3##	Elective-1	3 1 4
CS-328	Computer Architecture	3 0 3	MT-471	Applied Numerical Methods	2 1 3
CS-323	Artificial Intelligence	3 1 4	EF-305	Engineering Economics & Management	3 0 3

**Elective – 1 (3 + 1) (to be chosen from the following)**

- CS-330 Digital Communication Systems
- CS-324 Machine Learning
- CS-325 Software Development & Testing

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CS-425	Entrepreneurship of Computer Engineers	3 0 3	CS-406	Computer Engineering Project	0 3 3
CS-419	Digital Signal Processing	3 1 4	CS-438	Computer Systems Modelling	3 0 3
CS-431	Digital System Design	3 1 4	CS-432	Distributed Computing	2 1 3
CS-406	Computer Engineering Project	0 3 3	CS-4##	Elective-3	2 1 3
CS-4##	Elective-2	2 0 2	HS-405	Organizational Behaviour	3 0 3

**Elective – 2 (2 + 0) (to be chosen from the following)**

**Elective – 3 (2 + 1) (to be chosen from the following)**

- CS-433 Internet Computing
- CS-434 Bioinformatics
- CS-435 Software Project Management

- CS-426 Computer Systems Security
- CS-436 Computer Vision
- CS-437 Parallel Programming

**\* Duration one academic year: Requires literature survey and preliminary work during this Semester**



### 3.1.11 Electronic Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-111	Functional English	2 0 2	EE-121	Circuit Analysis	3 1 4
EE-120	Basic Electrical Engineering	3 1 4	EL-103	Basic Electronic	3 1 4
MT-171	Differential & Integral Calculus	3 0 3	MT-227	Differential Equations	3 0 3
EL-104	Electronic Engineering Drawing and Workshop	0 2 2	ME-110	Basic Mechanical Engineering	2 0 2
PH-122	Applied Physics	3 1 4	CY-110	Applied Chemistry for Engineers	2 1 3
CS-113	Introduction to Computing	1 1 2	HS-105	Pakistan Studies OR	2 0 2
			HS-127	Pakistan Studies (For Foreigners)	
			HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
EL-236	Electronic Devices and Circuits	3 1 4	EL-239	Analog Integrated Circuits	3 1 4
EL-255	Programming Languages	2 1 3	CS-216	Data Structure & Algorithms	3 0 3
HS-214	Academic Writing	3 0 3	EE-223	Instrumentation and Measurement	2 1 3
TC-202	Signals and Systems	2 1 3	EE-246	Electrical Machines	2 1 3
EE-382	Electromagnetic Fields	2 0 2	HS-205	Islamic Studies OR	2 0 2
MT-272	Linear Algebra & Geometry	3 0 3	HS-209	Ethical Behaviour	
HSK-II	Chinese Language	NC	TC-201	Digital Logic Design	2 1 3

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-331	Probability and Statistics	3 0 3	EF-304	Occupational Safety & Health	2 0 2
TC-307	Communication Systems	3 1 4	CS-430	Microprocessor Programming & Interfacing	3 1 4
TC-212	Digital Signal Processing	2 1 3	HS-304	Business Communication & Ethics	3 0 3
EF-305	Engineering Economics & Management	3 0 3	EL-344	Power Electronics	3 1 4
EL-301	Industrial Electronics	3 1 4	EE-374	Feedback Control Systems	3 1 4

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-471	Applied Numerical Methods	2 1 3	TC-421	Telecommunication Networks	3 1 4
EL-408	VLSI Systems Design	3 1 4	EL-###	Elective-II	3 1 4
HS-405	Organizational Behavior	3 0 3	HS-403	Entrepreneurship	2 0 2
EL-###	Elective-I	3 1 4	EL-401	Electronic Engineering Project	0 3 3
EL-401	*Electronic Engineering Project	0 3 3			

#### Elective Courses (to be chosen from the following)

- EL-433 Solid state Devices
- EL-421 Embedded Electronics
- EL-485 Opto. Electronics and Microwave Systems
- EL-422 Robotics

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.12 Telecommunications Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-111	Functional English	2 0 2	EL-103	Basic Electronics	3 1 4
CS-113	Introduction to Computing	1 1 2	CY-110	Applied Chemistry for Engineers	2 1 3
EE-120	Basic Electrical Engineering	3 1 4	EE-121	Circuit Analysis	3 1 4
TC-105	Programming Languages	2 1 3	EL-104	Electronic Engineering Drawing and Workshop	0 2 2
HS-105	Pakistan Studies OR	2 0 2	MT-171	Differential & Integral Calculus	3 0 3
HS-127	Pakistan Studies (For Foreigners)		HSK-I	Chinese Language	NC
PH-122	Applied Physics	3 1 4			

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-205	Islamic Studies OR	2 0 2	TC-212	Digital Signal Processing	2 1 3
HS-209	Ethical Behaviour (for Non-Muslims)		CS-216	Data Structure & Algorithms	3 0 3
TC-202	Signals & Systems	2 1 3	MT-272	Linear Algebra & Geometry	3 0 3
EL-236	Electronic Devices and Circuits	2 1 3	EE-223	Instrumentation and Measurement	2 1 3
TC-201	Digital Logic Design	2 1 3	HS-214	Academic Writing	3 0 3
MT-227	Differential Equations	3 0 3	MT-331	Probability & Statistics	3 0 3
EE-382	Electromagnetic Fields	2 0 2			
HSK-II	Chinese Language	NC			

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-304	Business Communication and Ethics	3 0 3	EL-333	Integrated Circuits	2 1 3
EF-305	Engineering Economics & Management	3 0 3	EF-304	Occupational Safety & Health	2 0 2
EE-374	Feedback Control System	3 1 4	TC-314	Wireless & Mobile Communication	3 1 4
TC-313	Antenna and Microwave Engineering	3 1 4	TC-315	Optical Fiber Communication	3 1 4
TC-307	Communication Systems	3 1 4	TC-311	Digital Communications and Information Theory	3 1 4

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-471	Applied Numerical Methods	2 1 3	HS-403	Entrepreneurship	3 0 2
CS-430	Microprocessor Programming and Interfacing	3 1 4	TC-485	Telecommunication Switching Systems	3 1 4
TC-####	Elective-I	2 0 2	TC-####	Elective-II	2 0 2
HS-405	Organizational Behaviour	3 0 3	TC-490	Telecomm Engineering Project	0 3 3
TC-421	Telecommunications Networks	3 1 4			
TC-490	Telecomm Engineering Project	0 3 3			

#### Inter-Disciplinary Elective (to be chosen from the following)

TC-422	Satellite Communication
TC-423	Navigational Aids and Radar Systems
TC-426	Mobile and Pervasive Computing
TC-427	Digital Image Processing

*\* Duration one academic year: Requires literature survey and preliminary work during this Semester*





### 3.1.13 Materials Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MM-102	Introduction to Engineering Materials	2 0 2	EE-118	Basic Electricity & Electronics	3 1 4
ME-101	Engineering Mechanics	3 1 4	AU-102	Engineering Drawing and Computer Graphics	2 1 3
ME-104	Workshop Practice	0 2 2	CY-109	Applied Chemistry	3 1 4
PH-122	Applied Physics	3 1 4	MT-114	Calculus	3 0 3
HS-104	Functional English	3 0 3	HS-105	Pakistan Studies OR	2 0 2
			HS-127	Pakistan Studies (for Foreigners)	
			HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MM-201	Physical Metallurgy	3 1 4	HS-205	Islamic Studies OR	2 0 2
MM-204	Engineering Ceramics and Refractory Materials	3 0 3	HS-209	Ethical Behaviour	
MM-205	Mechanics of Materials	3 1 4	IM-207	Computer Programming and Drafting	2 1 3
MT-215	Differential Equations and Complex Variables	3 0 3	MM-202	Production and Refining of Materials	3 0 3
MY-201	Metallurgical Thermodynamics & Kinetics	3 0 3	MM-208	Fundamentals of Modern Manufacturing and Foundry	3 1 4
HSK-II	Chinese Language	NC	MM-307	Joining of Materials	3 1 4
			MM-309	Construction Materials	2 0 2

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MM-301	Corrosion: Protection and Prevention	3 1 4	MM-305	Polymer and Composite Materials	3 1 4
MM-303	Inspection and Testing of Materials	3 1 4	MM-308	Materials Characterisation and Analytical Techniques	3 1 4
MM-304	Heat Treatment of Materials	3 1 4	PF-303	Applied Economics for Engineers	3 0 3
HS-304	Business Communication and Ethics	3 0 3	HS-403	Entrepreneurship	3 0 3
MT-315	Mathematical Methods	3 0 3	MT-441	Advanced Mathematical Techniques	3 0 3

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MM-404	Phase Transformations in Materials	3 1 4	MM-402	Design and Selection of Materials	2 1 3
MM-411	Nanomaterials and Nanotechnology	3 0 3	MY-402	Advanced Materials	3 0 3
MM-412	Surface Engineering	2 1 3	MM-415	Material Deformations and Failures: Mechanism and Analysis	3 0 3
MM-413	Nuclear Materials	2 0 2	MM-416	Biomedical and Functional Materials	2 0 2
MM-414	Total Quality Management	3 0 3	IM-417	Health, Safety and Environment	2 1 3
MM-410	*Materials Engineering Project	0 3 3	MM-410	Materials Engineering Project	0 3 3

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.14 Chemical Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CH-104	Chemical Engineering Principles	3 1 4	CH-106	Applied Chemistry	2 1 3
ME-101	Engineering Mechanics	3 1 4	CH-107	Chemical Engineering Thermodynamics-I	2 1 3
ME-104	Workshop Practice	0 2 2	ME-111	Engineering Drawing	2 1 3
HS-104	Functional English	3 0 3	EE-118	Basic Electricity & Electronics	3 1 4
PH-122	Applied Physics	3 1 3	MT-114	Calculus	3 0 3
			HS-105	Pakistan Studies OR	2 0 2
			HS-127	Pakistan Studies (for Foreigners)	
			HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CH-208	Analytical Chemistry	2 1 3	CH-213	Chemical Process Industries	2 0 2
CH-210	Chemical Engineering Thermodynamics-II	2 1 3	ME-209	Materials & Metallurgy	3 1 4
CH-209	Fluid Mechanics-I	2 1 3	CH-211	Fluid Mechanics-II	2 1 3
MM-205	Mechanics of Materials	3 1 4	MT-223	Differential Equation & Fourier Series	3 0 3
IM-207	Computer Programming & Drafting	2 1 3	HS-205	Islamic Studies OR	2 0 2
HSK-II	Chinese Language	NC	HS-209	Ethical Behaviour	
			CH-212	Particulate Technology	2 1 3

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CH-310	Fuel & Energy	2 1 3	CH-302	Separation Processes	3 1 4
CH-307	Heat Transfer	3 1 4	CH-306	Chemical Process Control	3 1 4
CH-309	Chemical Reaction Engineering	3 1 4	HS-304	Business Communication & Ethics	3 0 3
CH-311	Mass Transfer	3 1 4	MT-331	Probability and Statistics	3 0 3
MT-332	Advanced Calculus & Linear Algebra	3 0 3	PF-303	Applied Economics for Engineers	3 0 3

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CH-401	Process Modelling & Simulation	3 1 4	CH-417	Industrial Safety & Maintenance Management	2 0 2
CH-414	Chemical Plant Design	2 0 2	CH-418	Industrial Organization & Management	2 0 2
CH-404	Chemical Process Optimization	3 1 4	CH-###	Elective Course	2 0 2
CH-416	Petroleum Refinery & Petrochemical	2 1 3	CH-413	Gas Engineering	2 0 2
MT-441	Advanced Mathematical Techniques	3 0 3	CH-415	Transport Phenomena	3 0 3
CH-499	Chemical Engineering Project	0 3 3	CH-499	Chemical Engineering Project	0 3 3

#### Inter-Disciplinary Elective (to be chosen from the following)

- CH-408 Polymer Technology
- CH-410 Water Purification Process
- CH-411 Environmental Pollution Control
- CH-412 Biochemical Engineering

*\* Duration one academic year: Requires literature survey and preliminary work during this Semester*



### 3.1.15 Metallurgical Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MY-101	Introduction to Metallurgical Engg.	2 1 3	EE-116	Principles of Electrical Engineering	3 1 4
HS-111	Functional English	3 0 3	ME-101	Engineering Mechanics	3 1 4
PH-122	Applied Physics	3 1 4	CY-109	Applied Chemistry	3 1 4
ME-111	Engineering Drawing	2 1 3	ME-104	Workshop Practice	0 2 2
MT-114	Calculus	3 0 3	HS-105	Pakistan Studies OR	2 0 2
			HS-127	Pakistan Studies (for Foreigners)	
			HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-215	Differential Equation and Complex Variables	3 0 3	MY-210	Iron Making Processes	2 0 2
MY-206	Furnances and Refractories	3 1 4	EE-221	Instrumentation	3 1 4
MM-201	Physical Metallurgy	3 1 4	IM-207	Computer Programming and Drafting	2 1 3
MY-208	Mineral Processing	2 1 3	MY-207	Mechanical Behaviour Materials	2 1 3
HS-205	Islamic Studies OR	2 0 2	MY-209	Metal Forming and Shaping Processes	2 1 3
HS-209	Ethical Behaviour		MY-211	Metallurgical Thermodynamics and Kinetics	3 0 3
HSK-II	Chinese Language	NC			

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MM-303	Inspection and Testing of Materials	3 1 4	MY-304	Metallurgy of Welding	2 1 3
MY-308	Polymer & Composite Materials	2 1 3	MY-310	Non-Ferrous Extractive Metallurgy	3 0 3
MT-315	Mathematical Methods	3 0 3	HS-304	Business Communication and Ethics	3 0 3
MY-309	Steel Making Processes	2 0 2	MM-304	Heat Treatment of Materials	3 1 4
MY-303	Foundry: Principles, Methods and Practice	3 1 4	PF-303	Applied Economics for Engineers	3 0 3

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MY-413	Corrosion Engineering	2 1 3	MY-409	Metallurgical Plants and Quality Control	3 0 3
MY-411	Vacuum Metallurgy	2 0 2	MY-406	Powder Metallurgy	2 1 3
MY-412	Metallurgy of Advanced Steels	2 0 2	CH-407	Industrial Organization & Management	2 1 3
MY-410	Fracture Mechanics and Failure Analysis	2 1 3	MY-407	Design, Selection and Characterisation of Engineering Materials	3 1 4
IM-417	Health Safety and Environment	2 1 3	MY-402	Advanced Materials	3 0 3
HS-403	Entrepreneurship	3 0 3	MY-408	Metallurgical Engineering Project	0 3 3
MY-408	Metallurgical Engineering Project	0 3 3			

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.16 Polymer & Petrochemical Engineering

#### FIRST YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
PP-105	Introduction to Petrochemicals	2	0	2	PP-104	Introduction to Polymers	3	1	4
PP-106	Thermodynamics-I	2	0	2	ME-101	Engineering Mechanics	3	1	4
HS-104	Functional English	3	0	3	ME-111	Engineering Drawing	2	1	3
PH-122	Applied Physics	3	1	3	HS-105	Pakistan Studies OR	2	0	2
MT-114	Calculus	3	0	3	HS-127	Pakistan Studies (for Foreigners)			
PP-103	Workshop Practice	0	1	1	EE-118	Basic Electricity and Electronics	3	1	4
					HSK-I	Chinese Language			NC

#### SECOND YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
PP-203	Principles of Chemical Processes	2	1	3	PP-202	Polymer Physics	3	0	3
PP-207	Fluid Mechanics	3	0	3	PP-205	Petroleum & Petrochemical Products	2	0	2
PP-209	Thermodynamics-II	3	0	3	PP-212	Polymeric Materials & Their Characterization	3	0	3
PP-211	Computer Programming and Application	2	1	3	MM-205	Mechanics of Material	3	1	4
MT-330	Applied Probability and Statistics	2	1	3	MT-215	Differential Equations & Complex Variables	3	0	3
HS-205	Islamic Studies OR	2	0	2	PP-222	Polymer & Petrochemical Lab-II	0	1	1
HS-209	Ethical Behaviour								
PP-221	Polymer & Petrochemical Lab-I	0	1	1					
HSK-II	Chinese Language			NC					

#### THIRD YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
PP-210	Polymer Processing	2	0	2	PP-301	Process Control & Instrumentation	3	0	3
PP-307	Polymer Composites	3	0	3	PP-305	Fuels & Combustion	2	0	2
PP-308	Heat Transfer	3	0	3	PP-310	Industrial Organization and Management	2	1	3
PP-309	Mass Transfer	3	0	3	PP-311	Chemical Reaction Engineering	3	0	3
MT-471	Applied Numerical Method	2	1	3	PF-304	Applied Economics for Engineers	3	0	3
PP-321	Polymer & Petrochemical Lab-III	0	1	1	HS-304	Business Communication and Ethics	3	0	3
PP-322	Polymer & Petrochemical Lab-IV	0	1	1	PP-323	Polymer & Petrochemical Lab-V	0	1	1

#### FINAL YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours		Course Code	Course Title	Credit Hours			
		Th	Pr			Total	Th	Pr	Total
PP-402	Petrochemical Processes	3	1	4	PP-403	Plant Utilities & Safety	2	1	3
PP-406	Process Equipment Design	3	0	3	PP-409	Advanced Polymer Engineering	2	0	2
PP-410	Polymer Reaction Engineering	3	0	3	PP-414	Petroleum Refinery Engineering	2	1	3
PP-411	Separation Processes	3	1	4	PP-###	Elective Course			
PP-413	Process Optimization	3	0	3	HS-403	Entrepreneurship	3	0	3
PP-421	Polymer & Petrochemical Lab-VI	0	1	1	PP-408	Polymer and Petrochemical Engineering	0	3	3
PP-408	*Polymer and Petrochemical Engineering Project	0	3	3		Project			

#### Elective Courses (to be chosen from the following)

PP-412	Environmental Engineering	2	0	2
PP-425	Polymer Rheology	2	0	2
PP-427	Rubber Technology	2	0	2
PP-428	Process Modeling & Simulation	1	1	2
PP-429	Gas Engineering	2	0	2

\* Duration one academic year: Requires literature survey and preliminary work during this Semester





### 3.1.17 Software Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CT-175	Programming Fundamentals	3 1 4	SE-201	Object Oriented Concepts & Programming	3 1 4
CT-174	Fundamentals of Information Technology	2 1 3	PH-122	Applied Physics	3 1 4
CT-162	Discrete Structures	3 0 3	SE-207	Software Engineering	3 0 3
HS-104	Functional English	3 0 3	HS-115	Academic Reading and Writing	3 0 3
MT-173	Calculus	3 0 3	HS-205	Islamic Studies OR	2 0 2
HS-105	Pakistan Studies OR	2 0 2	HS-209	Ethical Behaviour	
HS-127	Pakistan Studies (for Foreigners)		HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-273	Differential Equations & Linear Algebra	3 0 3	SE-204	Database Management Systems	3 1 4
HS-218	Business Communications	2 1 3	SE-206	Web Engineering	3 1 4
CT-157	Data Structure Algorithms & Applications	3 1 4	SE-308	Software Design & Architecture	2 1 3
SE-208	Software Requirement Engineering	3 0 3	MT-331	Probability & Statistics	3 0 3
CT-258	Financial & Cost Accounting	3 0 3	HS-219	Professional Ethics	2 0 2
HSK-II	Chinese Language	NC			

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
IF-301	Applied Economics for Engineers	3 0 3	CS-351	Computer Communication Networks	3 1 4
SE-302	Human Computer Interaction	3 0 3	SE-309	Software Quality Engineering	2 1 3
SE-303	Operating Systems	3 1 4	SE-310	Software Project Management	3 0 3
SE-312	Software Construction & Development	2 1 3	SE-311	E-Commerce	3 0 3
SE-313	Formal Method in Software Engineering	3 0 3	SE-###	Elective I	3 1 4

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CT-460	Network & Information Security	3 1 4	HS-403	Entrepreneurship	3 0 3
SE-405	Modeling & Simulation	3 0 3	SE-408	Design Patterns	3 0 3
SE-409	Software Re-Engineering	3 0 3	SE-410	Stochastic Processes	3 0 3
SE-###	Elective II	3 1 4	SE-###	Elective III	3 0 3
SE-499	Software Engineering Project	0 3 3	SE-499	Software Engineering Project	0 3 3

#### Elective – I & II (to be chosen from the following)

#### Elective – III (to be chosen from the following)

SE-202 Computer Graphics  
CT-361 Artificial Intelligence & Expert Systems  
SE-406 Distributed Computing  
SE-407 Data Warehouse & Mining  
SE-487 Mobile Application Development  
SE-488 Computer Vision Fundamentals

SE-484 Software Testing Strategies & Techniques  
SE-485 Software Reliability Engineering  
SE-486 Information Systems Engineering  
SE-489 Cloud Computing

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.18 Biomedical Engineering

#### FIRST YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MT-100	Introduction to Mathematics	4	0	4	MT-114	Calculus	3	0	3
BM-120	Introduction to Biology	3	1	4	EE-119	Fundamentals of Electrical Engineering	3	1	4
BM-101	Introduction to Biomedical Engg	1	0	1	BM-114	Anatomy	3	1	4
CY-110	Applied Chemistry for Engineers	2	1	3	BM-115	Physiology-I	2	1	3
PH-127	Applied Physics for Engineers	2	1	3	HS-105	Pakistan Studies OR	2	0	2
HS-111	Functional English	2	0	2	HS-127	Pakistan Studies (for Foreigners)			
CS-113	Introduction to Computing	1	1	2	BM-130	Computer Aided Engineering Graphics	1	1	2
					HSK-I	Chinese Language			NC

#### SECOND YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EE-217	Circuit Theory	2	0	2	BM-222	Engineering Mechanics for Biomedical Engineers	3	0	3
BM-209	Basic Electronics	3	1	4	MT-223	Ordinary Differential Equations & Fourier Series	3	0	3
CS-109	Computer Programming	2	1	3	BM-203	Cellular and Molecular Biology	2	0	2
MT-272	Linear Algebra & Geometry	3	0	3	TC-201	Digital Logic Design	2	1	3
BM-230	Biochemistry	2	1	3	HS-205	Islamic Studies OR	2	0	2
BM-116	Physiology-II	2	1	3	HS-209	Ethical Behaviour			
HSK-II	Chinese Language			NC	BM-208	Biomedical Electronics	3	1	4

#### THIRD YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
BM-307	Bioinformatics	2	1	3	BM-310	Control Systems for Biomedical Engineers	2	1	3
BM-312	Biostatistics	2	1	3	BM-311	Bioinstrumentation & Measurements-II	3	1	4
EF-305	Engineering Economics and Management	3	0	3	HS-202	Business Communication	3	0	3
BM-306	Bioinstrumentation & Measurements-I	3	1	4	BM-313	Biomaterials	3	1	4
CS-430	Microprocessor Programming and Interfacing	3	1	4	EE-493	Digital Signal Processing	3	1	4

#### FINAL YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
BM-###	Electives-1				BM-413	Bio-Medical Engineering Project	0	3	3
BM-###	Electives-2				HS-403	Entrepreneurship	3	0	3
BM-401	Numerical Methods for Biomedical Engineering	3	0	3	BM-452	Modelling and Simulation for Biomedical Engineers	2	1	3
BM-406	Biomedical Imaging	2	1	3	BM-###	Electives-3			
BM-451	Biosignal Processing	2	1	3	HS-219	Professional Ethics	2	0	2
BM-413	*Bio-Medical Engineering Project	0	3	3	BM-###	Electives-4			

#### Elective Courses (to be chosen from the following)

BM-421	Genetic Engineering	3	0	3	BM-426	Ergonomics	3	0	3
BM-422	Biotechnology	2	1	3	BM-427	Product Design in Biomedical Engg	3	0	3
BM-423	Introduction to Robotics	2	1	3	BM-429	Tissue Engineering	2	1	3
BM-424	Fluid Dynamics	3	0	3	BM-430	Rehabilitation Engineering	2	1	3
BM-425	Telemedicine	3	0	3	BM-431	Biophotonics	3	0	3
BM-404	Biomechanics	2	1	3	BM-432	Neuroscience & Neural Networks	2	1	3
BM-435	Biophysics	3	0	3					

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



### 3.1.19 Food Engineering

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
FD-101	Introduction to Food Engineering	3 0 3	CY-108	Analytical Chemistry	3 1 4
PH-126	Physics	3 1 4	EL-232	Electronics	3 1 4
CY-106	Chemistry	3 1 4	CS-103	Programming Languages	2 2 4
HS-104	Functional English	3 0 3	MT-114	Calculus	3 0 3
BM-108	Computer Aided Engineering Graphics	1 2 3	HS-105	Pakistan Studies OR	2 0 2
			HS-127	Pakistan Studies (for Foreigners)	
			HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
FD-201	Thermodynamics	3 1 4	FD-204	Food Biochemistry	3 1 4
BM-201	Engineering Mechanics	3 1 4	FD-205	Fluid Mechanics	3 1 4
MT-223	Differential EU. & Fourier Series	3 0 3	MM-205	Mechanics of Materials	3 1 4
FD-203	Food Chemistry	3 1 4	FD-206	Food Enzymology	2 1 3
HS-205	Islamic Studies OR	2 0 2	MT-332	Advance Calculus & Linear Algebra	3 0 3
HS-209	Ethical Behaviour				
HSK-II	Chinese Language	NC			

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
FD-301	Unit Operations in Food Engg.-I	3 1 4	FD-304	Food Microbiology	3 1 4
FD-305	Machine Design for Food Engineers	3 0 3	FD-307	Heat & Mass Transfer	3 1 4
FD-306	Instrumentation & Measurement for Food Engineers	3 1 4	FD-308	Unit Operations in Food Engg.-II	3 1 4
MT-330	Applied Probability & Statistics	2 1 3	MT-471	Applied Numerical Method	2 1 3
HS-304	Business Communications & Ethics	3 0 3	BF-303	Applied Economics for Engineers	3 0 3

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
FD-410	Food Processing	3 0 3	FD-408	Food Regulations and Legislation	2 0 2
FD-402	Food Quality Control	3 0 3	FD-####	Electives	2 1 3
FD-406	Process Control in Food Industry	3 0 3	FD-####	Electives	2 1 3
FD-####	Electives	2 1 3	FD-407	Food Packaging	2 1 3
CH-407	Industrial Organisation and Management	3 0 3	FD-411	Food Plant Layout and Design	2 1 3
FD-430	*Food Engineering Project	0 3 3	FD-430	Food Engineering Project	0 3 3

#### Elective Course (to be chosen from the following)

FD-403	Food Biotechnology	2 1 3	FD-415	Meat, Poultry and Egg Processing	2 1 3
FD-404	Sugar and Confectionery	2 1 3	FD-416	Food Product Development	2 1 3
FD-409	Post Harvest Processing	2 1 3	FD-417	Oil and Fats Processing	2 1 3
FD-412	Dairy Processing	2 1 3	FD-418	Food Plant Hygiene and Sanitation	2 1 3
FD-413	Cereal Processing	2 1 3	HS-403	Entrepreneurship	3 0 3
FD-414	Beverage Processing	2 1 3	CH-405	Ind. Safety and Maintenance Management	2 1 3

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



## 3.2 Bachelor of Science Programmes

### 3.2.1 Development Studies

#### FIRST YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
DS-101	Introduction to Development Studies	3	1	4	DS-104	Introduction to Sociology	3	0	3
DS-102	Communication Skills for Development-I	2	2	4	DS-110	Principles of Economics-II	3	0	3
DS-103	Introduction to Accounting	3	0	3	DS-106	Computer Applications in Development-I	1	3	4
HS-104	Functional English	3	0	3	DS-107	Communication Skills for Development-II	2	2	4
DS-109	Principles of Economics-I	3	0	3	HS-105	Pakistan Studies OR	2	0	2
					HS-127	Pakistan Studies (for foreigners)			
					HSK-I	Chinese Language			NC

#### SECOND YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit		Hours Total	Course Code	Course Title	Credit		Hours Total
		Th	Pr				Th	Pr	
DS-201	Field Survey Methods-I	2	2	4	DS-207	Statistical Applications in Development-II	3	0	3
DS-202	Theory and Practical of Development Work	1	3	4	DS-208	Participatory Development	3	1	4
DS-203	Human Development	3	0	3	DS-209	Theory and Management of Organisations-I	3	0	3
DS-204	Computer Application in Development-II	1	3	4	DS-210	Field Survey Methods-II	2	3	5
DS-211	Development Economics	3	0	3	HS-205	Islamic Studies OR	2	0	2
DS-206	Statistical Applications in Development-I	3	0	3	HS-209	Ethical Behaviour (for non muslims)			
HSK-II	Chinese Language			NC					

#### THIRD YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit		Hours	Course Code	Course Title	Credit		Hours
		Th	Pr	Total			Th	Pr	Total
XXX-###	Elective	3	0	3	DS-306	Public Administration	3	0	3
DS-302	Development Planning Workshop-I	1	3	4	DS-307	Agricultural Development	3	0	3
DS-303	Legal Issues in Development	3	0	3	DS-308	Development Planning Workshop-II	1	3	4
DS-304	Urban Development	3	1	4	MT-336	Introduction to Linear Algebra and Programming	3	0	3
DS-305	Management of Organisation-II	3	0	3	DS-313	Political Economics	3	0	3
DS-309	Linear Programming	3	0	3	DS-316	Gender and Development	3	0	3

#### Elective Courses (to be chosen from the following)

DS-310	Budgeting in Development Project
DS-311	Project Planning and Management
DS-312	Public Health

#### FINAL YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours		Course Code	Course Title	Credit Hours			
		Th	Pr			Total	Th	Pr	Total
DS-402	Development Planning Workshop-III	1	3	4	DS-408	Sustainability in Development	3	0	3
DS-###	Elective	3	0	3	DS-409	Microfinance-II	3	0	3
DS-404	Entrepreneurship	3	0	3	DS-410	Development Planning in Pakistan	3	0	3
DS-405	Microfinance-I	3	0	3	DS-401	Development Studies Project	0	3	3
DS-406	Environmental Issues in Development	3	0	3					
DS-401	*Development Studies Project	0	3	3					

#### Elective Courses (to be chosen from the following)

DS-419	Case Studies in Development Project
DS-421	Corporate Social Responsibility and Application in Development
DS-422	Case Studies in Agricultural Development

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



## 3.2.2 Management Sciences

### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-104	Functional English	3 0 3	EC-104	Financial Accounting	3 0 3
CT-158	Fundamental of I.T.	2 0 2	MT-153	Principles of Economics	3 0 3
MT-113	Business Mathematics	3 0 3	MG-112	Introduction to Sociology	3 0 3
MG-110	Fundamentals of Management	3 0 3	MG-114	Introduction to Business	3 0 3
MG-111	Principles of Marketing	3 0 3	HS-205	Islamic Studies OR	2 0 2
HS-105	Pakistan Studies OR	3 0 3	HS-209	Ethical Behaviour (for Non-Muslims)	
HS-127	Pakistan Studies (for foreigners)		HSK-I	Chinese Language	NC

### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-201	Oral Communications	2 1 3	MT-214	Applied Statistics	3 0 3
MG-211	Strategic Management	3 0 3	MG-214	Human Resource Management	3 0 3
MG-212	Technology Management	3 0 3	MG-215	Business Law & Policy	3 0 3
MG-213	Introduction to Business Finance	3 0 3	MG-216	Managerial Accounting	3 0 3
MT-253	Micro Economics	3 0 3	MT-256	Macro Economics	3 0 3
CT-153	Programming Languages	2 1 3			
HSK-II	Chinese Language	NC			

### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-301	Business & Organizational Communication	3 0 3	MT-355	Financial Risk Management	3 0 3
MG-311	Product & Brand Management	3 0 3	MG-314	Operations Research & Management	3 1 4
MG-312	Business Research Methods	3 0 3	MG-315	Business & Economic Forecasting	2 1 3
MG-313	Business Ethics & Corporate Social Responsibility	3 0 3	HS-403	Entrepreneurship	3 0 3
IM-416	Management Information System	2 1 3	MG-316	Consumer Behaviour & Marketing Management	3 0 3
IM-303	Production Management	3 1 4			

### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MG-4XX	Specialization-1	3 0 3	MG-4XX	Specialization-6	3 0 3
MG-4XX	Specialization-2	3 0 3	MG-4XX	Specialization-7	3 0 3
MG-4XX	Specialization-3	3 0 3	CT-461	E-Commerce	3 1 4
MG-4XX	Specialization-4	3 0 3	MG-480	Business Process Management	2 1 3
MG-4XX	Specialization-5	3 0 3	MG-499	Final Year Project	0 3 3
MG-499	*Final Year Project	0 3 3			

#### Specialization (to be chosen from the following)

MG-450	Principles of Supply Chain Management	MG-460	Marketing Strategy
MG-451	Green Supply Chain Management	MG-461	Global Entrepreneurial Marketing
MG-452	Information Technology for SCM	MG-462	Introduction to Advertising
MG-453	Supply Chain Inventory	MG-463	Corporation & Consumer Behaviour
MG-454	Supply Planning & Control Systems	MG-464	Personal Selling and Public Relation
MG-455	Business Process Simulation	MG-465	Trade and Consumer Promotions
MG-456	Procurement Management	MG-466	Advertising Management

\* Duration one academic year: Requires literature survey and preliminary work during this Semester





### 3.2.3 Textile Sciences

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
TE-111	Textile Chemistry	3 1 4	IM-207	Computer Programming & Drafting	2 1 3
ME-101	Engineering Mechanics	3 1 4	MT-114	Calculus	3 0 3
HS-104	Functional English	3 0 3	PH-122	Applied Physics	3 1 4
TS-109	Introduction to Textiles	2 1 3	TS-108	Textile Raw Materials-II	3 0 3
TS-102	Textile Raw Materials-I	2 1 3	HS-105	Pakistan Studies OR	2 0 2
			HS-127	Pakistan Studies (for foreigners)	
			HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
ME-217	Elements of Machine Dynamics & Design	3 0 3	MF-303	Applied Economics for Engineers	3 0 3
TS-209	Colour Science	2 1 3	TS-206	Yarn Production Processes	3 1 4
TS-205	Pre-Spinning Processes	3 1 4	TS-208	Weaving Preparatory Processes	3 1 4
TS-207	High Performance Fibers	3 0 3	TS-245	Pre-treatment in Textiles	3 1 4
MT-221	Linear Algebra & Ordinary Differential Equations	3 0 3	TS-233	Textile Testing-I	3 1 4
HS-205	Islamic Studies OR	2 0 2			
HS-209	Ethical Behaviour (for non muslims)				
HSK-II	Chinese Language	NC			

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
TS-341	Advanced Yarn Production Processes	3 1 4	TS-354	Knitting Technology	3 0 3
TS-343	Weaving Mechanism	3 1 4	TE-307	Utilities for Textile Industry	3 1 4
TE-305	Quality Control in Textiles	2 0 2	TS-358	Textile Printing	3 1 4
TS-356	Textile Dyeing	3 1 4	TS-361	Textile Testing-II	3 1 4
HS-304	Business Communication & Ethics	3 0 3	HS-405	Organizational Behaviour	3 0 3

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
TS-455	Advanced Fabric Manufacturing Techniques	3 0 3	HS-403	Entrepreneurship	3 0 3
TE-452	Textile Finishing	3 1 4	TE-454	Textile Merchandizing	3 0 3
TE-318	Textile & Environment	2 0 2	TS-470	Technical Textiles	3 0 3
TS-458	Project	0 3 3	TS-458	Project	0 3 3
TE-453	Garment Manufacturing	3 0 3	TE-406	Textile Production Management	3 0 3

*\* Duration one academic year: Requires literature survey and preliminary work during this Semester*



### 3.2.4 Computer Science

[This Scheme of Studies is also applicable for Thar Institute of Engineering, Sciences and Technology (TIEST)]

#### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CT-175	Programming Fundamentals	3 1 4	CS-251	Logic Design & Switching Theory	3 1 4
CT-174	Fundamentals of Information Technology	2 1 3	CT-162	Discrete Structures	3 0 3
MT-171	Differential & Integral Calculus	3 0 3	CT-251	Object Oriented Programming	3 1 4
PH-122	Applied Physics	3 1 4	HS-104	Functional English	3 0 3
HS-205	Islamic Studies OR	2 0 2	HS-105	Pakistan Studies OR	2 0 2
HS-209	Ethical Behaviour		HS-127	Pakistan Studies (for Foreigners)	
			HSK-I	Chinese Language	NC

#### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CT-157	Data Structure Algorithms & Applications	3 1 4	CS-252	Computer Architecture & Organisation	3 1 4
MT-227	Differential Equations	3 0 3	CT-257	Database Management Systems	3 1 4
HS-115	Academic Reading and Writing	3 0 3	HS-218	Business Communications	2 1 3
HS-219	Professional Ethics	2 0 2	CT-221	Financial & Cost Accounting	3 0 3
CT-259	System Analysis & Design	3 0 3	MT-272	Linear Algebra & Geometry	3 0 3
HSK-II	Chinese Language	NC			

#### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CT-354	Software Engineering	3 0 3	CS-351	Computer Communication Networks	3 1 4
CT-353	Operating Systems	3 1 4	CT-261	Artificial Intelligence & Expert Systems	3 1 4
CT-363	Design and Analysis of Algorithms	3 0 3	CT-362	Web Engineering	3 1 4
MT-331	Probability & Statistics	3 0 3	CT-367	Theory of Programming Languages	3 0 3
CT-364	Theory of Automata and Formal Languages	3 0 3	MT-471	Applied Numerical Methods	2 1 3

#### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CT-460	Network & Information Security	3 1 4	CS-451	Parallel Processing	3 1 4
HS-405	Organisational Behaviour	3 0 3	CT-465	Compiler Design	3 0 3
CT-###	Elective I	3 0 3	HS-403	Entrepreneurship	3 0 3
CT-###	Elective II	3 1 4	CT-###	Elective III	3 1 4
CT-499	Software Based Project	0 3 3	CT-499	Software Based Project	0 3 3

Elective – I (to be chosen from the following)

Elective – II & III (to be chosen from the following)

- \*CT-366 E-Commerce
- \*CT-485 Natural Language Processing
- \*CT-464 Modeling & Simulation

- \*CT-352 Computer Graphics
- \*CT-360 Visual Programming
- \*CT-462 Distributed Computing
- \*CT-463 Data Warehouse Mining
- \*CT-481 Wireless Network & Mobile Computing
- \*CT-484 Introduction to Cyber Security

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



## 3.2.5 Computational Finance

### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-151	Calculus-I	3 0 3	MT-152	Calculus-II	3 0 3
MT-153	Principles of Economics	3 0 3	MT-154	Computer Applications in Finance	1 2 3
HS-104	Functional English	3 0 3	CT-157	Data Structure Algorithm & Application	3 1 4
MT-155	Introduction to Financial Accounting	3 0 3	MT-156	Discrete Mathematics	3 0 3
HS-205	Islamic Studies OR		HS-105	Pakistan Studies OR	
HS-209	Ethical Behavior (Non-Muslim)	2 0 2	HS-127	Pakistan Studies (for Foreigners)	2 0 2
CT-153	Programming Languages	2 1 3	*EC-202	Cost Accounting	3 0 3
			HSK-I	Chinese Language	NC

### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-272	Linear Algebra & Geometry	3 0 3	MT-254	Statistical Inference	3 0 3
MT-251	Multivariate Calculus	4 0 4	MT-255	Introduction to Mathematical Finance	3 0 3
MT-252	Introduction to Probability & Statistics	3 1 4	MT-227	Differential Equations	3 0 3
HS-201	Oral Communications	2 1 3	MT-256	Macroeconomics	3 0 3
MT-253	Microeconomics	3 0 3	MT-257	Stochastic Calculus	3 0 3
HSK-II	Chinese Language	NC			

### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-351	Operations Research	3 0 3	MT-442	Numerical Methods	3 0 3
MT-352	Financial Management	3 0 3	SE-307	E-Commerce	3 1 4
MT-353	Discrete-Time Finance	3 0 3	MT-355	Financial Risk Management	3 0 3
MT-354	Financial Derivatives	3 0 3	MT-356	Stochastic Models in Finance	3 0 3
HS-301	Business and Organizational Communications	3 0 3	HS-311	Logic & Critical Thinking	3 0 3

### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-403	Entrepreneurship	3 0 3	MT-455	Econometrics	3 0 3
MT-451	Continuous-Time Finance	3 0 3	MT-456	Financial Engineering	3 0 3
MT-####	Elective-1	3 0 3	MT-####	Elective-3	3 0 3
MT-####	Elective-2	3 0 3	MT-####	Elective-4	3 0 3
MT-460	*Computational Finance Project	0 3 3	MT-460	*Computational Finance Project	0 3 3

#### Elective Courses (to be chosen from the following)

MT-452	Financial Modelling	MT-457	Numerical Computing in Finance
MT-453	Organizational Design and Implementation	MT-458	Islamic Banking & Financial System
MT-454	Fuzzy Sets and Fuzzy Logic	MT-459	Actuarial Science

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



## 3.2.6 Applied Physics

### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CS-101	Introduction to Computer	2 1 3	MT-227	Differential Equations	3 0 3
MT-173	Calculus	3 0 3	EL-255	Programming Language	2 1 3
PH-101	Mechanics & Properties of Matter	3 0 3	PH-104	Waves & Oscillations	2 0 2
PH-102	Heat & Thermodynamics	2 0 2	PH-105	Electricity & Magnetism	3 0 3
CY-115	General Chemistry-I	2 1 3	PH-106	Physics Lab-II	0 1 1
PH-103	Physics Lab-I	0 1 1	CY-116	General Chemistry-II	2 1 3
HS-105	Pakistan Studies OR		HS-104	Functional English	3 0 3
HS-127	Pakistan Studies(for Foreigners)	2 0 2	HSK-I	Chinese Language	NC

### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-201	Oral Communication	2 1 3	PH-205	Classical Mechanics	3 0 3
PH-201	Optics	2 0 2	PH-204	Introduction to Material Science	3 0 3
PH-202	Modern Physics	3 0 3	MT-331	Probability & Statistics	3 0 3
PH-203	Physics Lab-III	0 1 1	MT-228	Complex Variables & Fourier Transforms	3 0 3
MT-272	Linear Algebra & Geometry	3 0 3	EL-238	Digital Electronics	3 1 4
EL-232	Electronics	3 1 4	PH-206	Physics Lab-IV	0 1 1
HS-205	Islamic Studies OR				
HS-209	Ethical Behaviour (for Non-Muslims)	2 0 2			
HSK-II	Chinese Language	NC			

### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
PH-301	Quantum Mechanics-I	3 0 3	PH-307	Mathematical Physics-II	3 0 3
PH-302	Laser Engineering	3 0 3	PH-308	Quantum Mechanics-II	3 0 3
PH-303	Mathematical Physics-I	3 0 3	PH-309	Electromagnetic Theory-II	3 0 3
PH-304	Electromagnetic Theory-I	3 0 3	PH-310	Solid State Physics-I	3 0 3
PH-305	Vacuum Science	2 0 2	PH-312	Physics Lab-VI	0 1 1
HS-301	Business & Organizational Communication	3 0 3	PH-313	Cosmology and Theory of Relativity	3 0 3
PH-311	Physics Lab-V	0 1 1			

### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
PH-401	Computational Physics	2 0 2	EL-344	Power Electronics	3 1 4
PH-409	Atomic & Molecular Physics	2 0 2	##-###	Elective-2	3 1 4
PH-403	Solid State Physics-II	3 0 3	PH-407	Applied Physics Project	0 3 3
PH-417	Nuclear Physics	2 0 2	PH-412	Introduction to Nanoscience and Nanotechnology	2 0 2
PH-407	*Applied Physics Project	0 3 3	PH-413	Surface Science	2 0 2
##-###	Elective-1	3 1 4			
PH-408	Physics Lab-VII	0 1 1			
PH-415	Statistical Mechanics	2 0 2			

#### Elective Course (Materials Group) (to be chosen from the following)

MM-401	Material Characterization Techniques	3 1 4
MY-402	Advance Materials	3 0 3

#### Elective Course (Electronics Group) (to be chosen from the following)

EL-484	Optoelectronics and Microwave Systems	3 1 4
EL-333	Integrated Circuits	2 1 3

#### Elective Course (Space Group) (to be chosen from the following)

PH-416	Space Physics	3 1 4
PH-411	Applications of Space Physics	3 1 4

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



## 3.2.7 Industrial Chemistry

### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CY-113	Inorganic Chemistry-I	3 0 3	CY-120	Analytical Chemistry-I	3 0 3
CY-114	Organic Chemistry-I	3 0 3	CY-117	Physical Chemistry-I	3 0 3
CY-118	Industrial Chemistry Lab-I	0 1 1	CY-119	Industrial Chemistry Lab-II	0 1 1
HS-104	Functional English	3 0 3	EE-119	Fundamentals of Electrical Engineering	3 1 4
PH-123	General Physics-I	2 1 3	CT-158	Fundamental of Information Technology	2 0 2
MT-173	Calculus	3 0 3	HS-105	Pakistan Studies OR	
			HS-127	Pakistan Studies (Foreigners)	2 0 2
			PH-124	General Physics-II	2 1 3
			HSK-I	Chinese Language	NC

### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CY-205	Inorganic Chemistry-II	3 0 3	CY-209	Analytical Chemistry-II	3 0 3
CY-208	Organic Chemistry-II	3 0 3	CY-210	Physical Chemistry-II	3 0 3
CY-206	Industrial Chemistry Lab-III	0 1 1	CY-207	Industrial Chemistry Lab-IV	0 1 1
HS-205	Islamic Studies OR	2 0 2	HS-201	Oral Communication	2 1 3
HS-209	Ethical Behavior (for Non-Muslim)		CH-202	Fluid Mechanics-I	3 1 4
MT-223	Ordinary Differential Equations & Fourier Series	3 0 3	EL-102	Basic Electronics	3 1 4
MT-331	Probability & Statistics	3 0 3			
CT-153	Programming Languages	2 1 3			
HSK-II	Chinese Language	NC			

### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-301	Business & Organizational Communication	3 0 3	CY-404	Separation Techniques	3 0 3
CH-206	Thermodynamics	3 1 4	CY-303	Reaction Kinetics	3 0 3
CY-312	Spectroscopy	3 0 3	CY-308	Unit Processes	3 0 3
CY-313	Polymer Science	3 0 3	CY-311	Industrial Chemistry Lab VI	0 1 1
CY-305	Industrial Stoichiometry	3 0 3	CY-314	Natural Products	3 0 3
CY-310	Industrial Chemistry Lab V	0 1 1	CY-315	Nuclear & Radiation Chemistry	3 0 3
			CH-203	Chemical Process Industries	3 0 3

### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
CY-402	Environmental Chemistry	3 0 3	CY-416	Nanotechnology	3 0 3
CH-405	Industrial Safety & Maintenance Management	2 1 3	##-###	Elective-3	- - -
##-###	Elective-1	- - -	##-###	Elective-4	- - -
##-###	Elective-2	- - -	CY-415	*Industrial Chemistry Project	0 3 3
CY-415	*Industrial Chemistry Project	0 3 3			

#### Elective Courses (to be chosen from the following)

CY-403	Beverage Technology	3 0 3	CY-413	Surfactants and Cosmetics	3 0 3
CY-406	Fat & Oil Processing	3 0 3	CH-406	Petroleum Refining & Petrochemicals	3 0 3
CY-414	Pharmaceutical Chemistry	3 0 3	CY-408	Polymer Technology	3 0 3
CY-411	Surface Coatings	3 0 3	CH-407	Industrial Organization & Management	2 1 3

\* Duration one academic year: Requires literature survey and preliminary work during this Semester





## 3.2.8 English Linguistics

### FIRST YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-104	Functional English	3 0 3	HS-115	Academic Reading & Writing	3 0 3
HS-105	Pakistan Studies OR	2 0 2	HS-119	Islamic Studies OR	2 0 2
HS-127	Pakistan Studies (for Foreigners)		HS-209	Ethical Behaviour (for non muslims)	
HS-116	Anthropology	3 0 3	CT-173	Introduction to Computer Applications	2 1 3
HS-117	Foundation of Education	3 0 3	HS-118	Media Studies	3 0 3
HS-120	Introduction to English Literature-I	3 0 3	HS-122	History of English Literature-I	3 0 3
HS-121	Introduction to Linguistics	3 0 3	HS-123	Phonetics & Phonology	3 0 3
			HSK-I	Chinese Language	NC

### SECOND YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-201	Oral Communication	2 1 3	HS-202	Business Communication	3 0 3
HS-210	Philosophy	3 0 3	HS-203	Organizational Behaviour	3 0 3
HS-216	Principles of Economics	3 0 3	HS-204	Human Rights & Citizenship	3 0 3
HS-217	Visionary Discourse	3 0 3	HS-213	History of English Literature-II	3 0 3
HS-211	Morphology & Syntax-I	3 0 3	HS-215	Semantics	3 0 3
HS-212	Introduction to English Literature-II	3 0 3			
HSK-II	Chinese Language	NC			

### THIRD YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
MT-337	Introduction to Statistics	3 0 3	HS-319	Introduction to Research	3 0 3
HS-305	Morphology & Syntax-II	3 0 3	HS-308	Lexical Studies	3 0 3
HS-306	Sociolinguistics	3 0 3	HS-309	Discourse Analysis	3 0 3
HS-307	Pedagogical Grammar	3 0 3	HS-310	Psycholinguistics	3 0 3
HS-###	Elective-I	3 0 3	HS-320	Human Resource Management	3 0 3
HS-###	Elective-II	3 0 3	HS-###	Elective-III	3 0 3

#### Elective Courses (to be chosen from the following)

HS-312	Translation Studies	HS-316	English for Specific Purposes
HS-313	Media Discourse Analysis	HS-317	Language & Gender
HS-314	World Englishes	HS-318	Anthropological Studies
HS-315	Language in Education		

### FINAL YEAR

Fall Semester			Spring Semester		
Course Code	Course Title	Credit Hours Th Pr Total	Course Code	Course Title	Credit Hours Th Pr Total
HS-402	Research Methods in Linguistics	3 0 3	HS-406	Stylistics	3 0 3
HS-411	Second Language Acquisition	3 0 3	HS-407	Language, Culture & Identity	3 0 3
HS-412	Language Teaching Methodologies	3 0 3	HS-408	Genre Analysis	3 0 3
HS-418	Pragmatics	3 0 3	HS-421	Syllabus Designing & Testing	3 0 3
HS-401	Project	0 3 3	HS-401	Project	0 3 3

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



## 3.2.9 Economics & Finance

### FIRST YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EC-101	Microeconomics-I	3	0	3	EC-103	Macro Economics-I	3	0	3
MT-100	Introduction to Mathematics		NC		EC-104	Financial Accounting	3	0	3
EC-102	Principles of Accounting	3	0		EC-105	Information Technology in Business	2	1	3
CT-173	Introduction to Computer Applications	2	1	3		Economics			
HS-104	Functional English	3	0	3	HS-115	Academic Reading & Writing	3	0	3
HS-105	Pakistan Studies OR				EC-106	Principles of Management	3	0	3
HS-127	Pakistan Studies for Foreigners	2	0	2	HSK-I	Chinese Language			NC

### SECOND YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EC-201	Microeconomics-II	3	0	3	EC-204	Macro Economics-II	3	0	3
MT-230	Statistics & Probability	3	0	3	EC-205	Development Economics	3	0	3
EC-202	Cost Accounting	3	0	3	EC-206	Economy of Pakistan	3	0	3
EC-203	Computer Application to Business & Finance	2	1	3	MT-231	Statistics Inference	3	0	3
HS-201	Oral Communication	2	1	3	EC-207	Managerial Accounting	3	0	3
HS-205	Islamic Studies OR				EC-208	Introduction to Business Finance	3	0	3
HS-209	Ethical Behavior (for Non-Muslim)	2	0	2					
HSK-II	Chinese Language			NC					

### THIRD YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EC-301	Political Economics	3	0	3	EC-305	Comparative Economic System	3	0	3
EC-302	Mathematical Economics-I	3	0	3	EC-306	Mathematical Economics-II	4	0	4
EC-303	Econometrics-I	3	0	3	EC-307	Econometric-II	3	0	3
EC-304	Money and Banking	3	0	3	EC-308	Business Research Methods	3	0	3
HS-301	Business and Organizational Communication	3	0	3	EC-309	Financial Management	3	0	3

### FINAL YEAR

Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
EC-401	Public Finance	3	0	3	EC-404	Islamic Economics	3	0	3
EC-402	International Trade Theory	3	0	3	EC-###	Elective-III (Economics)	3	0	3
EC-403	Applied Economics	2	1	3	EC-###	Elective-IV (Finance)	3	0	3
EC-###	Elective-I (Economics)	3	0	3	EC-###	Elective-V (Economics / Finance)	3	0	3
EC-###	Elective-II (Finance)	3	0	3	EC-405	Project	0	3	3
EC-405	Project	0	3	3					

#### Inter-Disciplinary Elective (to be chosen from the following)

EC-406	Urban Economics	EC-410	Labor Economics
EC-407	Industrial Economics	EC-411	International Finance
EC-408	Transport Economics	EC-412	Corporate Finance
EC-409	Environmental Economics	EC-413	Project Appraisal & Investment Analysis

*\* Duration one academic year: Requires literature survey and preliminary work during this Semester*



### 3.3 Bachelor of Architecture

#### FIRST YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
AR-101	Basic Design-I	1	3	4	AR-102	Basic Design-II	1	3	4
AR-121	Introduction to Environmental Studies	2	1	3	AR-111	Introduction to History, Theory and Culture	2	1	3
AR-143	Communications and Allied Skills-I	1	2	3	AR-144	Communication and Allied Skills-II	1	2	3
HS-104	Functional English	3	0	3	AR-151	Construction and Materials-I	1	2	3
MT-112	Mathematics for Architects	3	0	3	CE-112	Fundamentals of Statics	2	0	2
PH-111	Basic Physics for Architects	1	1	2	HS-105	Pakistan Studies OR	2	0	2
CY-111	Basic Chemistry for Architects	1	1	2	HS-127	Pakistan Studies (for Foreigners)			
					HSK-I	Chinese Language			NC

#### SECOND YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Th	Hours Pr	Total	Course Code	Course Title	Credit Th	Hours Pr	Total
AR-201	Architectural Design-I	1	4	5	AR-202	Architectural Design-II	1	4	5
AR-211	History and Theory-I	2	1	3	AR-212	History and Theory-II	2	1	3
AR-243	Communication and Allied Skills-III	1	2	3	AR-221	Development Studies	2	1	3
AR-251	Construction and Materials-II	1	2	3	AR-231	Environmental Design and Systems-I	2	1	3
CE-113	Surveying for Architects	2	1	3	AR-244	Communication and Allied Skills-IV	1	2	3
HS-205	Islamic Studies OR	2	0	2	CE-252	Structure for Architects-I	2	0	2
HS-209	Ethical Behaviour (for Non-Muslims)								
HSK-II	Chinese Language			NC					

#### THIRD YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
AR-301	Architectural Design-III	1	5	6	AR-302	Architectural Design-IV	1	5	6
AR-381	Introduction to Landscape Architecture	1	2	3	AR-312	History and Theory-IV	2	1	3
AR-311	History and Theory-III	2	1	3	AR-321	Housing and Community Development	2	1	3
AR-331	Environmental Design and Systems-II	2	1	3	AR-342	Communication and Allied Skills-V	1	2	3
AR-351	Construction and Materials-III	1	2	3	AR-352	Construction and Materials-IV	1	2	3
AR-361	Introduction to Architectural Conservation	2	1	3	CE-352	Structure for Architects-II	2	0	2

#### FOURTH YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
AR-401	Architectural Design-V	1	5	6	AR-402	Architectural Design-VI	1	5	6
AR-403	Introduction to Interior Design	1	2	3	AR-421	Urban Planning and Design	2	1	3
AR-411	History and Theory-V	2	1	3	AR-431	Environmental Design and Systems-III	2	1	3
AR-442	Communication and Allied Skills-VI	1	2	3	AR-461	Research Methodologies	2	1	3
AR-451	Construction and Materials-V	1	2	3	AR-XXX	Elective	-	-	3

#### Elective Courses (to be chosen from the following)

AR-472	Documentation Techniques in Architecture	1	2	3	AR-473	Studies in Critical Regionalism	2	1	3
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#### FINAL YEAR

Fall Semester				Spring Semester					
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
AR-503	Architectural Design Project*	0	4	4	AR-503	Architectural Design Project*	2	8	10
AR-522	Comprehensive Environmental Design	1	5	6	AR-561	Professional Practice	2	1	3
AR-552	Construction and Materials-VI	2	1	3					

\* Duration one academic year: Requires literature survey and preliminary work during this Semester



***Undergraduate  
Prospectus 2020***



# CHAPTER 4

## *Mode of Application for Admission*





## **4.1 GENERAL GUIDANCE**

4.1.1 The prospectus is available on NED University website at “[www.neduet.edu.pk/admission](http://www.neduet.edu.pk/admission)”.

4.1.2 Candidates shall be required to apply online for admission:

- a) They will be required to get the print-out of Application Form, sign it and submit along with other documents as mentioned in 4.1.4 at the time of submission of original documents.
- b) Candidates desirous for taking admission in Thar Institute of Engineering, Sciences and Technology (TIEST), will also be required to fill admission form as mentioned above. Criteria for such applicants will be the same as of NED University.
- c) Application processing fee of Rs. 4,000/- is required to be paid in designated branches of banks.
- d) Candidates may apply under more than one category through the same online admission process. Admission categories have been specified in Chapter 5.
- e) Candidates will be required to upload the scanned copy of their HSC Mark Sheet / IBCC Equivalency Certificate on the Admission Portal of the University.

4.1.3 Applications received in one category shall not be transferred to another category.

4.1.4 All such candidates whose name appeared in merit list and are called for admission should submit two sets of following documents along with the originals:

- a) Domicile of Sindh Province
- b) Secondary School Certificate and Marks Certificate
- c) H.S.C. Marks Sheet or equivalent document
- d) Equivalence Certificate from IBCC for foreign examinations, if applicable
- e) Hafiz-e-Quran Certificate, if applicable
- f) Migration Certificate in case of having passed HSC examination from a Board other than Karachi Board.

4.1.5 Candidates for admission under following categories are required to submit documents as mentioned below in addition to those mentioned in Para 4.1.4:-

- a) R-6 i.e., Resident of Rural Areas of Karachi, should submit original School Leaving Certificate.
- b) SF-9(a) i.e., Real Sons / Daughters of Professional Engineers of Sindh, should submit copy of Engineering Degree of the parent and proof of valid registration with Pakistan Engineering Council.

- c) SF-9(b) i.e., Real Sons / Daughters of Professional Architects & Planners, should submit copy of Architecture & Planners Degree of the parent and proof of valid registration with Pakistan Council of Architects and Town Planners (PCATP)
- d) R-9 i.e., Outstanding Sportsmen, should submit sports testimonials as mentioned in Para R-9 (iv) 3 in Chapter 5.
- e) Candidates having passed Cambridge Higher School Certificate or General Certificate of Education ('A' Level) Examination or equivalent examination must submit relevant document to establish their date of birth.

4.1.6 Application Form, all fee and documents attached with the application form shall not be returnable.

4.1.7 Incomplete applications shall not be considered.

4.1.8 The complete online application alongwith proof of payment of processing fee must reach to the Admission Office of the University not later than 1400 hours on the date notified for the submission of Admission Form by the University in the press and Website. Any application received after this date or found deficient in any respect will be summarily rejected. Any certificate or matter in addition to the specified requirement shall be treated as irrelevant and discarded.

4.1.9 Candidates are directed to write their names, Father Name & Date of Birth on Admission Application as mentioned on their SSC Certificate.

## **4.2 ELIGIBILITY CONDITIONS**

4.2.1 Applicant should be domiciled in Sindh Province, except for reserved categories.

4.2.2 He/ She must have passed either Higher School Examination (HSC) from any authorised Board of Education in Pakistan or an equivalent Foreign Examination recognized as such by the University OR have appeared in any such examination and waiting for final results. A-level candidates having their final exams to be held in November 2020 can also be considered for admission. All Candidates should fulfill the following conditions (after announcement of respective results):

- a) The year of passing the examination held should not be earlier than the three years immediately prior to submission of application.
- b) i) Each applicant should have obtained at least 60% marks in aggregate.



- ii) Candidates having obtained at least 55% marks in aggregate are eligible to apply for admission in all BS programmes except in BS(CS).
- c) i) For admission in any undergraduate Programme, subjects examined at the HSC level must include Pre- Engineering subjects of Mathematics, Physics and Chemistry.
- ii) Any applicant who has passed HSC or equivalent Examination with subjects of Mathematics, Physics, and Computer Science shall however be considered for admission only in BE Electronics, Telecommunication, Computer Systems, Software Engineering programmes and BS in Computer Science, Management Sciences, Development Studies, English Linguistic and Computational Finance. However, applicants who have passed their HSC or equivalent examination with Mathematics, Statistics and Computer Science will be considered for admission only in BS Management Sciences, English Linguistic, Development Studies, Computational Finance and Economics & Finance.
- iii) Any applicant who has passed HSC Commerce or equivalent examination shall be considered for admission in BS Management Sciences, English Linguistic, Development Studies and Economics & Finance only.
- iv) Any applicant who has passed HSC Arts or equivalent examination shall be considered for admission in BS English Linguistics, Development Studies and Economics & Finance only.

**NOTE: Admission to such candidates [as mentioned in Para 4.2.2.c(ii), (iii) & (iv)] shall only be offered in above disciplines subject to availability of seats in these disciplines. Such candidates, if admitted, shall however, not to be considered for Change of Discipline after First Year.**

- d) Any applicant who has passed HSC or equivalent Examination with Pre-Medical subjects of Physics, Chemistry and Biology shall however be considered for admission only against allocated seats in Biomedical Engineering, English Linguistic, Development Studies and Economics & Finance, if otherwise eligible.

- Note:** i) An applicant who has passed HSC Part I from one Board of Examinations and HSC Part II from any other Board of Examinations shall not be considered for admission.
- ii) No student, already enrolled in this University, can be considered for admission again.

- 4.2.3 An applicant should have either passed Pre-admission Entry Test of this University with at least 50% marks, OR have scored at least 800 in SAT-I and also secured at least 1500 in SAT-II with subjects of Physics / Statistics, Chemistry / Computer Science and Mathematics / Biology. **(Applicants with Commerce / Arts background will have SAT scores in the relevant subjects as notified by the University separately).**

**NOTE: All these tests have validity of one year. Hence, the current year result will only be considered.**

- 4.2.4 Any such nominee applying under category R-11(a) or R-11(b) or R-12(a) or R-12(b) or R-12(c) or R-12(d) or R-12(e) or R-13(a) or R-13(b) or 13(c) or 13(d) may produce documentary evidence of having passed Pre-Admission Entry Test conducted by any university / authority acceptable as such by this University.

#### **4.3 EQUIVALENCE OF FOREIGN EXAMINATIONS**

- 4.3.1 An applicant who has passed A-Level or any two-year Pre-University Examination at 11th and 12th grades or 12th and 13th / OAC Grades (or similar Examinations) with subjects of Physics/Statistics, Chemistry/Computer Science and Mathematics (or Biology for Biomedical Engineering, Development Studies and English Linguistics only) (or Commerce for BS Management Sciences, English Linguistics and Development Studies) (or Arts for BS English Linguistics and Development Studies) **must submit an Equivalence Certificate (obtained from Inter-Board Committee of Chairmen) along with his/her Application Form for admission.**
- 4.3.2 All such applicants having passed / appeared in any foreign examination as mentioned in 4.3.1 must also submit an Equivalence Certificate (obtained from Inter-Board Committee of Chairmen) of their earlier qualification i.e. O-level / 10th Grade along with his/her Application Form for admission.)

#### **4.4 DETERMINATION OF MERIT POSITION**

- 4.4.1 (a)(i) The overall merit in respect of candidates for admission shall be determined according to the following criteria:

**Merit Score = 50% weightage to HSC-I + 50 % weightage to Entry Test**

- (ii) Candidates having appeared in any foreign examination including A-Level and 12th Grade shall have their O-level / 10th Grade equivalent marks (As mentioned in respective IBCC Equivalency Certificate) to be considered with 50% weightage in place of HSC-I.



- (iii) Candidates having passed their HSC/A-level during earlier years will have 50% weightage to their complete result of HSC /A-Level
- (iv) Entry Test Marks indicate marks obtained in University Pre-Admission Entry Test or equivalent marks as obtained in any other tests as recognized by NED University under Para 4.2.3

4.4.1 (b) The admission offered based upon above merit shall remain provisional till the submission and subsequent verification (from relevant authorities) of final HSC or equivalent Mark Sheet or IBCC Equivalency Certificate (for foreign exams only) with minimum 60 % marks obtained (55% marks for certain disciplines). In any case the final Mark Sheet must be submitted before 31st December, 2020 as otherwise the admission will be liable to be cancelled.

4.4.2 For applicants who have passed their qualifying examination in 2017 or in 2018 or in 2019 their merit positions for the purpose of admission shall be determined after deduction of 10 marks from the total obtained in their respective qualifying examinations. The same deduction shall apply in case of improvement. **(Including applicants who have taken improvement examination in the same calendar year as that of the HSC / qualifying examinations).**

4.4.3 In case of tie for merit position in the selection for admission, the tie shall be resolved by the following criteria:

- a) Aggregate marks obtained in NED University Pre-Admission Entry Test shall be the criterion for resolving the merit.
- b) Any further tie shall be resolved by considering the following criteria:
  - i) For applicants with Pre-Engineering / Pre-Medical/Computer Science: marks obtained in sections of Mathematics (or Biology as the case

may be), then Physics/Statistics and then Chemistry/ Computer Science of NED University Pre-Admission Entry Test.

- ii) For applicants with Commerce: marks obtained in sections of Accounting, then Economics and then Business Mathematics of NED University Pre-Admission Entry Test
- iii) For applicants with Arts: marks obtained in sections of English (Combination of Vocabulary & Grammar and Reading Comprehension) and then General Knowledge and then Mathematics (General) of NED University Pre-Admission Entry Test.

#### **4.5 MARKS FOR HAFIZ-E-QUR'AN**

Any applicant who is Hafiz-e-Quran shall have 20 marks added to the marks obtained by the candidate. He/She shall have to provide the original Sanad of Hafiz-e-Quran from Wafaq-ul-Madaris and be prepared to appear and qualify in a test as notified by the University.

#### **4.6 REJECTION OF APPLICATION**

- 4.6.1 The Vice Chancellor of the University will be the competent to reject any application and to cancel admission without assigning any reason.
- 4.6.2 The application shall be rejected summarily in case the applicant is found guilty of any suppression or misrepresentation of material facts at any stage. The Vice Chancellor can further debar him from seeking admission in the University and its affiliated colleges.

#### **4.7 DISPLAY OF MERIT LIST**

The Merit list for each category under Regular and Self Finance schemes will be notified and displayed on the University Website.



# CHAPTER 5

## *Admission Category*



## 5.1 REGULAR SCHEME.

### 5.1(i) Distribution of Seats

Category No.	CE	UE	PE	CE (CN)	ME	TE	IM	AU	EE	TC	CS	EL	CH	MY	MM	PP	FD	BM	SE	CT	AP	IC	CF	DS	TS	MG	B-Arch	EG	EC	TCT	Total
R-1(a)	HSC (Pre-Engg/Comp Science) from Board of Intermediate Education, Karachi.																														
	103	43	28	25	133	47	72	34	125	55	88	93	43	33	37	37	22	36	55	41	49	50	49	4	52	37	20	7	42	4	1464
R-1(c)	HSC (Commerce) from Board of Intermediate Education, Karachi																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	9	0	16
R-1(d)	HSC (Arts) from Board of Intermediate Education, Karachi																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0
R-1(b)	HSC(Pre-Med) from Board of Intermediate Education, Karachi																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	3	0	2	0	2	0	0	17
R-2(a)	HSC (Pre-Engg./Comp Science/Commerce/Arts) from Board of Intermediate and Secondary Education Hyderabad																														
	3	1	1	1	2	1	1	0	2	2	1	2	1	1	1	0	0	0	2	1	2	2	2	0	1	1	1	0	2	8	42
R-2(b)	HSC (Pre-Eng. Comp Science/Commerce/Arts) from Board of Intermediate & Secondary Education, Mirpurkhas																														
	2	1	0	1	2	0	1	0	3	1	1	0	1	1	1	0	0	0	2	1	2	1	1	0	2	3	1	0	3	17	48
R-2(c)	HSC (Pre-Engg./Comp Science/Commerce/Arts) from Board of Intermediate & Secondary Education Sukkur																														
	2	1	0	1	2	0	1	0	2	1	1	1	1	1	0	0	0	0	2	1	1	1	1	1	2	3	1	0	3	5	35
R-2(d)	HSC (Pre-Engg./Comp Science/Commerce/Arts) from Board of Intermediate & Secondary Education Larkana																														
	2	1	0	1	2	0	1	0	2	1	1	1	1	1	0	0	0	0	1	1	2	2	2	1	2	2	1	0	1	4	33
R-3(a)	HSC (Pre-Engg/Pre-Med/Comp Science/Commerce/Arts) from Federal Board of Education Islamabad																														
	4	2	1	0	3	1	1	0	4	1	3	3	2	2	0	0	1	0	2	5	2	2	2	1	2	1	3	1	4	2	55
R-3(b)	HSC (Pre-Engg./Comp Science) from Aga Khan Board																														
	2	2	0	0	3	1	3	1	1	1	1	1	2	1	0	1	2	0	1	6	1	1	1	1	1	1	2	1	3	2	43
R-3(c)	HSC (Commerce)/Arts from Aga Khan Board																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	1	0	5
R-3(d)	HSC (Pre-Med.) from Aga Khan Board																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	1	0	0	5
R-3(e)	HSC (Pre-Engg/Pre-Med/Comp Science/Commerce/Arts) from Ziauddin Board																														
	1	1	1	0	1	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	18
4(a)	A-Level (Pre Engg / Comp Science)																														
	2	3	3	2	8	4	5	1	8	3	6	4	4	1	2	3	3	3	11	6	6	5	6	5	5	2	4	2	2	1	120





Category No.	CE	UE	PE	CE (CN)	ME	TE	IM	AU	EE	TC	CS	EL	CH	MY	MM	PP	FD	BM	SE	CT	AP	IC	CF	DS	TS	MG	B-Arch	EG	EC	TCT	Total
R-4(c)	12th Grades and Equivalent (Pre Engg/Pre-Med/Comp Science/Commerce/Arts)																														
	1	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	0	22
R-4(d)	A-Level (Pre-Medical)																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	1	0	1	0	1	0	0	7
R-4(e)	A-Level (Commerce) Institution																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0	4
R-4(f)	A-Level (Arts)																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
R-5	HSC (Pre Engg/Pre-Med/Comp Science/Commerce/Arts) from Board other than Karachi, Aga Khan, Ziauddin, Hyderabad, Mirpurkhas, Sukkur, Larkana and Federal Board & Foreign Examinations																														
	1	1	1	0	1	1	0	0	1	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	1	1	0	0	0	12
R-6	Rural Areas of City District Karachi (HSC Pre Engg/Comp Science/Commerce/Arts). from Board of Intermediate Education, Karachi)																														
	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	6
R-7(a)	Real Sons/Daughters of NED University Teachers, HSC (Pre Engg/Pre-Med/Comp Science/Commerce/Arts)																														
	1	1	1	0	2	1	2	0	2	1	2	1	1	1	1	1	1	2	1	1	1	1	1	0	1	1	1	1	1	0	31
R-7(b)	Real Sons/Daughters of NED University Non-Teaching Staff, HSC (Pre Engg/Pre-Med/Comp Science/Commerce/Arts)																														
	1	1	1	0	2	1	2	0	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	30
R-9	Outstanding Sportsmen																														
	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	4
R-10(a)	Nominees of Dinshaw Family																														
	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
R-10(b)	Nominees of LEJ Foundation																														
	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	6
R-11(a)	Nominees of UET Lahore/Taxila/ Applicant to be nominated by this university																														
	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
R-11(b)	Nominees of UET Peshawar / Applicants to be nominated by this university																														
	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
R-12(a)	Nominees of Govt. of Baluchistan																														
	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
R-12(b)	Nominees of FATA																														
	4	0	0	0	2	0	0	0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	1	1	1	0	2	0	0	1	0



Category No.	CE	UE	PE	CE (CN)	ME	TE	IM	AU	EE	TC	CS	EL	CH	MY	MM	PP	FD	BM	SE	CT	AP	IC	CF	DS	TS	MG	B-Arch	EG	EC	TCT	Total
R-12(c)	Nominees of Govt. of Azad Kashmir																														
	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
R-12(d)	Nominees of Govt. of Gilgit Baltistan																														
	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	7
R-12(e)	Nominees of Ministry of Education Govt. of Pakistan																														
	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
R-12(f)	Nominees of Indian Occupied Kashmiri (IOK)																														
	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5
R-13(a)	Nominees of GHQ (Army)																														
	2	0	0	0	2	1	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
R-13(b)	Nominees of NHQ (NAVY)																														
	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
R-13(c)	Nominees of Pakistan Air Force																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
R-13(d)	Nominees of Sindh Rangers																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
R-14	Foreign candidates whose names are forwarded by Economics Affairs Division (Ministry of Finance), Islamabad																														
	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	5
<b>TOTAL</b>	<b>144</b>	<b>60</b>	<b>37</b>	<b>31</b>	<b>173</b>	<b>60</b>	<b>91</b>	<b>36</b>	<b>164</b>	<b>68</b>	<b>113</b>	<b>112</b>	<b>59</b>	<b>45</b>	<b>47</b>	<b>45</b>	<b>33</b>	<b>62</b>	<b>83</b>	<b>67</b>	<b>70</b>	<b>70</b>	<b>70</b>	<b>25</b>	<b>71</b>	<b>70</b>	<b>37</b>	<b>25</b>	<b>80</b>	<b>49</b>	<b>2097</b>

**Key for abbreviations:**

CE Civil Engineering  
 UE Urban Engineering  
 PE Petroleum Engineering  
 CN Civil Engineering (Specialized in Construction)  
 ME Mechanical Engineering  
 TE Textile Engineering  
 IM Industrial & Manufacturing Engineering  
 AU Automotive Engineering  
 EE Electrical Engineering  
 CS Computer Systems Engineering

EL Electronic Engineering  
 TC Telecommunications Engineering  
 MM Materials Engineering  
 CH Chemical Engineering  
 MY Metallurgical Engineering  
 PP Polymer & Petrochemical Engineering  
 SE Software Engineering  
 BM Bio-Medical Engineering  
 FD Food Engineering  
 CT Computer Science

AR Architecture  
 TS Textile Sciences  
 DS Development Studies  
 MG Management Sciences  
 CF Computational Finance  
 IC Industrial Chemistry  
 AP Applied Physics  
 EG English Linguistics  
 EC Economics & Finance

- NOTE:** i) Applicants for admission in Bio and Medical Engineering should have interest in Natural and Basic Sciences as they will be studying Biology, Physiology, Anatomy and Biochemistry.  
 ii) Applicants for admission in Architecture Programme should have skill and interest in free hand sketching drawing and communication.



## 5.1(ii) Description of Categories

R-1(a)	Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examinations from Board of Intermediate Education, Karachi.	R-4(f)	Candidates having passed Foreign Examination (A Level, Cambridge/ London/Oxford) equivalent to H.S.C. (Arts) Examinations from Educational Institution located in Pakistan.
R-1(b)	Candidates having passed H.S.C.(Pre-Medical) Part I & II Examinations from Board of Intermediate Education, Karachi.	<b>N.B: The seats between sub-categories R-4(a) to R-4(f) are inter-transferable, whenever considered necessary by the University.</b>	
R-1(c)	Candidates having passed H.S.C.(Commerce) Part I & II Examinations from Board of Intermediate Education, Karachi.	R-5	Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce) Part I & II Examinations from any Board other than Karachi, Aga Khan, Ziauddin, Hyderabad, Mirpurkhas, Sukkur, Larkana, Federal, Aga Khan Board and Foreign Examinations.
R-1(d)	Candidates having passed H.S.C.(Arts) Part I & II Examinations from Board of Intermediate Education, Karachi.	R-6	Candidates who are residents Rural Area of the Karachi and have passed HSC (Pre-Engineering/ Computer Science/ Commerce) Part-I & Part-II Examination from the Board of Intermediate Education, Karachi and have passed Pre-Admission Entry Test of this University with at least 50% marks or any other such test as described in Para 4.2.3. Candidates having passed Matriculation / SSC from any school located in any Rural Area of the Karachi shall be given the preference.
R-2(a)	Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce) Part I & II Examinations from Board of Intermediate & Secondary Education, Hyderabad.	R-7(a)	Candidates – Real Sons/Real Daughters of the NED University Teachers are eligible for admission provided that: <ul style="list-style-type: none"> <li>i) The candidate has passed HSC (Pre-Engineering/ Pre-Medical/Computer Science/ Commerce/ Arts) and have passed Pre-Admission Entry Test of this University with at least 50% marks or any other such test as described in Para 4.2.3.</li> <li>ii) His/her real father/mother is serving in the University and has put in a minimum of three years continuous regular service in the University; or has retired from the service of the University after satisfactory completion of a minimum qualifying service or has expired after completion of minimum of three years continuous service in this University.</li> </ul>
R-2(b)	Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce) Part I & II Examinations from Board of Intermediate & Secondary Education, Mirpurkhas.		
R-2(c)	Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce/Arts) Part I & II Examinations from Board of Intermediate & Secondary Education, Sukkur.		
R-2(d)	Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce/Arts) Part I & II Examinations from Board of Intermediate & Secondary Education, Larkana.		
R-3(a)	Candidates having passed HSC (Pre-Engineering/ Pre-Medical/Computer Science/Commerce/Arts) Part I & II Examinations from Federal Board of Intermediate & Secondary Education, Islamabad.		
R-3(b)	Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examinations from Aga Khan Board.		
R-3(c)	Candidates having passed H.S.C.(Commerce) Part I & II Examinations from Aga Khan Board.		
R-3(d)	Candidates having passed H.S.C.(Pre-Medical) Part I & II Examinations from Aga Khan Board.	R-7(b)	Candidates- Real Sons / Real Daughters of the NED University employees other than teachers are eligible for admission provided that: <ul style="list-style-type: none"> <li>i) The candidate has passed HSC (Pre-Engineering/ Pre-Medical/Computer Science/ Commerce/ Arts) and have passed Pre-Admission Entry Test of this University with at least 50% marks or any other such test as described in Para 4.2.3</li> <li>ii) His/her real father/mother is serving in the University and has put in minimum of three years continuous regular service in the University; has retired from the service of the University after satisfactory completion of minimum qualifying service or has expired after completion of minimum of three years continuous regular service in this University.</li> </ul>
R-3(e)	Candidates having passed H.S.C. (Pre-Engg/Pre-Med/ Comp Science/Commerce/Arts) Part I & II Examinations from Ziauddin University Education Board.		
R-4(a)	Candidates having passed Foreign Examination (A-Level, Cambridge/ London/Oxford) equivalent to H.S.C. (Pre-Engineering/Computer Science) Examination.		
R-4(c)	Candidates having passed Foreign Examination (12th Grade or Others) equivalent to H.S.C. (Pre-Engineering/ Pre-Medical / Computer Science / Commerce/ Arts) Examination.		
R-4(d)	Candidates having passed foreign Examination (A Level, Cambridge/London/Oxford) equivalent to H.S.C. (Pre-Medical) Examination.		
R-4(e)	Candidates having passed Foreign Examination (A Level, Cambridge/ London/Oxford) equivalent to H.S.C. (Commerce) Examinations from Educational Institution located in Pakistan.	<b>N.B: The seats between the sub-categories R-7(a) and R-7(b) are inter-transferable, whenever considered necessary by the University.</b>	



R-9 The candidates who are outstanding Sportsmen are eligible for admission under this category provided that:

- (i) They are domiciled in Sindh province and have passed HSC (Pre-Engineering/Computer Science) Examination or equivalent foreign examination with at least 60% aggregate marks and have passed Pre-Admission Entry Test of this University with at least 50% marks or any other such test as described in Para 4.2.3.
- (ii) They are domiciled in Sindh province and have passed Examination or equivalent foreign examination and have passed Pre-Admission Entry Test of this University with at least 50% marks or any other such test as described in Para 4.2.3

**N.B. The following are the approved sports and games for admission under this category:**

**Sports:** athletics, boxing, swimming, and rowing.

**Games:** basketball, cricket, hockey, football, volleyball, badminton, tennis, table tennis and squash.

- (iii) Subject to the conditions that the candidate has represented any sports Organizations/ Institutions/ Universities/ Board or Colleges of Sindh Province for the last three years to be calculated from the last date of submission of application form, the order of priority for selection under sports category shall be as follows:

**Priority Order:**

1. Member of National Team
2. National Champion (Individual/Team)
3. Member of National Junior Team
4. Member of Pakistan Universities Team/ Pakistan Boards Team
5. National Junior Champion (Individual/Team)
6. Inter University/Inter Board Champion (Individual/Team)
7. National Youth Champion (Individual/Team)
8. Member of Sindh Provincial Team
9. Sindh Champion (Individual/Team)

- (iv) The criteria for selection for admission under this category shall be:

- (iv)1. Amongst candidates who qualify, not more than two sportsmen shall be selected for any individual sport/game. The merit list will be prepared considering the highest order of achievement in sports.
- (iv)2. Based on the order of achievements if there is a tie between two or more candidates, their lower order achievements will be considered and they will be subsequently rated in the light of the order of priority list. In case of further tie a candidate with achievement in individual event will get preference over a candidate with achievement in team event. If still the tie is not resolved the older candidate will get the preference over the younger candidate

- (iv)3. The information about event, name of team and distinction achieved by the team as well as by the candidate shall be supplied on the application form along with attested copies of other certificates issued by appropriate authorities listed in Para 9(iv)6 below. The achievement certificates must be in printed form.

- (iv)4. The membership certificate of each sport team should contain the name of the player, sport, team represented and the year of representation.

- (iv)5. The Championship certificate of one sports team should contain the name of player, sport, team represented, name of event/category/class in which player secured championship, year of championship and position.

**N.B: For priority order Nos. 1 & 4, only senior teams will be considered. Any team without mentioning age group, will be considered as senior team. Normally teams with age groups are as under:**

Senior Team (without age limit)  
Junior Team (under 20 years age)  
Youth Team (under 16 years age)

- (iv)6. For the purpose of selection of the candidates under sports category, only those achievements should be considered, the events of which have taken place before the last date of submission of application form for admission. Attested copies of all certificates are to be enclosed with the application form. Original certificates must be shown at the time of interview for selection. At the time of interview only those original certificates will be accepted for consideration whose photocopies have already been provided with the application form. The Sports Certificates must be furnished by the sports authorities mentioned below:

- For priority order Nos. 1, 2, 3 & 5 Secretary of concerned Sports Federation.
- For priority order No. 4 & 6 Director Sports Higher Education Commission/ Secretary Inter Boards Tournament Committee as the case may be.
- For priority order No.7 Director General Pakistan Sports Board and Coordinator/ Director Sindh Sports Board.
- For priority order No. 8 & 9 Secretary concerned provincial Sports Association.
- For membership of Pakistan Board Team, Secretary of Inter Boards Tournaments Committee.
- For Inter-University Championship, Secretary of Pakistan University Sports Board.
- For Inter-Board Championship, Secretary of Inter-Board Tournament Committee



(iv)7. Selection of applicants will be made by Sports Admission Committee constituted by the Vice-Chancellor. The merit documents of applicants will be verified by the nominees of the Committee from the authorities and/or sources which Committee considers appropriate.

(iv)8. Applicants admitted under this category i.e. Outstanding Sportsmen will be required to produce an affidavit to the effect that they will represent the University in their respective games/sports whenever called upon to do so and that they would not play as professional or represent any other public/private institute on part time/full time basis. The required affidavit will be produced on judicial stamp paper of Rs.50/- duly signed by the Notary Public.

#### **Reserved Categories for Nominees**

Each nominee under the reserved categories of any nominating agency / body must have passed HSC(Pre-Engineering) Examination or an equivalent Foreign Examination with Physics Chemistry and Mathematics OR Biology for Bio-Medical Engineering under Category R-10(b), as recognized by this University with at least 60% aggregate marks and also eligible as per Clause 4.2.

R-10(a) Nominees who belong to Parsi/ Minority Communities and whose names are recommended by Mr. J. H. Dinshaw (Dinshaw Family)

R-10(b) Nominees who are recommended by Latif Ebrahim Jamal (LEJ Foundation).

R-11(a) Nominees of UET Lahore/Taxila under reciprocal basis through Education Department, Govt. of Punjab.

R-11(b) Nominees of UET Peshawar under reciprocal basis through Education Department, Govt. of Khybar Pakhtoonkhwa. Each nominee shall be charged the lump sum amount of **Rs.38,000/-** as educational expenses (excluding normal fee charges) to be paid at the time of admission to NED University.

R-12(a) Nominees from Baluchistan whose names are forwarded by Education Department, Government of Baluchistan

R-12(b) Nominees from Federally Administered Tribal Areas whose names are forwarded by States and Frontier Regions Division.

R-12(c) Nominees from Azad Kashmir whose names are forwarded by Nomination Board, Azad Jammu and Kashmir.

R-12(d) Nominees from Gilgit Baltistan whose names are forwarded by Kashmir Affairs and Northern Affairs Division, Government of Pakistan.

R-12(e) Nominees from Federal Capital Area whose names are forwarded by Cabinet Division, Government of Pakistan, Islamabad.

R-12(f) Nominees who are Indian Occupied Kashmir (IOK) whose names are forwarded by Ministry of Finance, Revenue, Economic Affairs Division.

R-13(a) Nominees who are children of Army Personnel and whose names are forwarded by Welfare Rehabilitation Directorate, GHQ, Rawalpindi.

R-13(b) Nominees who are children of Navy Personnel and whose names are forwarded by the Director Personal Services, Naval Headquarters.

R-13(c) Nominees who are children of Air Force Personnel and whose names are forwarded by the Directorate of Education, Air Headquarters.

R-13(d) Nominees who are children of Rangers Personnel and whose names are forwarded by the Director General, Pakistan Rangers (Sindh).

R-14 Nominees who are foreign nationals and whose names are forwarded by the Economic Affairs Division Government of Pakistan, Islamabad.

#### **5.1(iii) Transfer of Seats**

(a) If the number of candidates in Arts, Commerce and Pre- Medical groups selected for admission under categories from R-1 to R-4 falls short of the allocated number of seats, after admission and waiting lists have been considered, the balance number of seats in each of these categories will be transferred to respective categories reserved for pre- engineering group. Any further balance seats from categories R-1 to R-4 as well as all balance seats in other categories R-5 to R-14 will be transferred to R-1(a).

(b) Any seat remaining vacant from any category at Thar Institute of Engineering, Sciences and Technology (TIEST) will be transferred to Mirpur Khas Board. Any further vacant seat will be inter-transferable with other categories wherever considered necessary by the University administration.



### 5.2(i) Distribution of Seats

[illegible]



Category No.	CE	UE	PE	CE (CN)	ME	TE	IM	AU	EE	TC	CS	EL	CH	MY	MM	PP	FD	BM	SE	CT	AP	IC	CF	DS	TS	MG	B-Arch	EG	EC	TCT	Total
SF-7(b)	Afghan candidates whose names are forwarded by Higher Education Commission, Pakistan																														
	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
SF-8	Real Sons/Daughters of NEDAN Life Member, HSC (Pre-Engg / Comp. Science)																														
	1	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
SF-9(a)	Real Sons / Daughters of Professional Engineers																														
	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
SF-9(b)	Real Sons / Daughters of Professional Architects & Planners																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
SF-9(c)	Real Sons / Daughters of Expatriate Pakistanis, HSC (Pre-Engg / Comp. Science)																														
	1	0	0	0	1	0	1	0	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	8
SF-10(a)	Nominees of Dinshaw Family																														
	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
SF-10(b)	Nominees of S. S. International																														
	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SF-11	Sponsor Seats																														
	40	0	0	0	40	0	0	0	40	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
TOTAL	85	10	3	4	88	10	29	4	97	12	39	39	31	5	3	5	7	18	19	33	0	0	0	0	0	0	13	0	0	11	565

**Key for abbreviations:**

CE Civil Engineering  
 UE Urban Engineering  
 PE Petroleum Engineering  
 CN Civil Engineering (Specialized in Construction)  
 ME Mechanical Engineering  
 TE Textile Engineering  
 IM Industrial & Manufacturing Engineering  
 AU Automotive Engineering  
 EE Electrical Engineering  
 CS Computer Systems Engineering

EL Electronic Engineering  
 TC Telecommunications Engineering  
 MM Materials Engineering  
 CH Chemical Engineering  
 MY Metallurgical Engineering  
 PP Polymer & Petrochemical Engineering  
 SE Software Engineering  
 BM Bio-Medical Engineering  
 FD Food Engineering  
 CT Computer Science

AR Architecture  
 TS Textile Sciences  
 DS Development Studies  
 MG Management Sciences  
 CF Computational Finance  
 IC Industrial Chemistry  
 AP Applied Physics  
 EG English Linguistics  
 EC Economics & Finance

- NOTE:** i) Applicants for admission in Bio and Medical Engineering should have interest in Natural and Basic Sciences as they will be studying Biology, Physiology, Anatomy and Biochemistry.  
 ii) Applicants for admission in Architecture Programme should have skill and interest in free hand sketching drawing and communication.



**5.2(ii) Description of Categories and  
Respective Condition for Application**

SF-1(a)	Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examinations and improvement, if any, from Board of Intermediate Education, Karachi.	SF-5	Candidates having passed HSC (Pre-Engineering) Part I & II Examinations from any Board other than Karachi, Aga Khan, Ziauddin, Hyderabad, Mirpurkhas, Sukkur, Larkana, Federal Board and Foreign Examinations.
SF-1(b)	Candidates having passed H.S.C. (Pre-medical) Part I & II Examinations and improvement, if any, from Board of Intermediate Education, Karachi,	<b>NOTE:</b>	<b>Rs.740,000/- (Rupees Seven Hundred Forty Thousand only) shall be required to be deposited in designated branch of the banks as Self Finance Fee for admission in all disciplines under above categories (SF-1 to SF-5).</b>
SF-2(a)	Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examination and improvement, if any, from Board of Intermediate & Secondary Education, Hyderabad.	SF-6(a)	Candidates having passed Foreign Examination (A Level, Cambridge/London/Oxford) equivalent to H.S.C. (Pre-Engineering/Computer Science).
SF-2(b)	Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examination and improvement, if any, from Board of Intermediate & Secondary Education, Mirpurkhas.	SF-6(b)	Candidates having passed Foreign Examination (12th Grade or Others) equivalent to H.S.C. Pre-Engineering/ Computer Science).
SF-2(c)	Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examination and improvement, if any, from Board of Intermediate & Secondary Education, Sukkur.	SF-6(c)	Candidates having passed HSC (Pre-Engineering/ Computer Science) Part I & II Examination from Federal Board of Intermediate & Secondary Education, Islamabad.
SF-2(d)	Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examination and improvement, if any, from Board of Intermediate & Secondary Education, Larkana.	SF-7(a)	Foreign candidates whose names are forwarded by the Higher Education Commission Government of Pakistan, Islamabad must have passed HSC (Pre-Engineering/ Computer Science) Examination or an equivalent foreign examination.
SF-3(a)	Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examination and improvement, if any, from Federal Board of Intermediate & Secondary Education, Islamabad.	SF-7(b)	Afghan Candidates whose name are forwarded by the Higher Education Commission Government of Pakistan, Islamabad must have passed HSC (Pre-Engineering/ Computer Science) Examination or an equivalent foreign examination.
SF-3(b)	Candidate having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examinations and improvement if any, from Aga Khan Board Karachi.	SF-8	Candidates who are Real Sons / Daughters of NED University Alumni Network (NEDAN) Life Members.
SF-3(e)	Candidates having passed H.S.C. (Pre-Engg/Pre-Med/ Comp Science/Commerce/Arts) Part I & II Examinations from Ziauddin University Education Board.	SF-9(a)	Candidates who are Real Sons/ Daughters of Professional Engineers of Sindh Province and have passed HSC (Pre-Engineering) Part I & II Examinations from Board of Intermediate Education or equivalent foreign examination as recognised by the University.
SF-4(a)	Candidates having passed Foreign Examination (A Level: Cambridge/ London/Oxford) equivalent to H.S.C. (Pre-Engineering/Computer Science) part I & II Examinations.	<b>N.B:</b>	<b>The candidate's real parent must have valid registration with Pakistan Engineering Council.</b>
SF-4(b)	Candidates having passed Foreign Examination (12th Grade or Others) equivalent to H.S.C. (Pre-Engineering/ Computer Science) part I & II Examination.	SF-9(b)	Candidates who are Real Sons/ Daughters of Professional Architects/Planners of Sindh Province and have passed HSC (Pre-Engineering) Part I & II Examinations from Board of Intermediate Education or equivalent foreign examination as recognised by the University.



**N.B:** The candidate's parent must have valid registration with the Pakistan Council of Architects and Town Planners (PCATP).

**SF-9(c)** Candidates who are Real Sons/ Daughters of Expatriate Pakistanis and have passed HSC (Pre-Engineering/ Computer Science) Examinations or equivalent foreign examination as recognised by the University.

**SF-10(a)** Nominees who belong to Parsi / Minority Communities and whose names are recommended by Dinshaw Family.

**SF-10(b)** Nominees who are recommended by Mr. Waqar Yousuf (S.S. International).

**SF-11** Candidates who are residents of Pakistan and have passed HSC (Pre-Engineering) Part I & II Examinations from Board of Intermediate Education or equivalent foreign examination as recognized by the University.

**NOTE: i)** Rs. 940,000/- (Rupees Nine Hundred Fourty Thousand only) shall be required to be deposited in designated branch of the banks as Self Finance Fee for admission under the above categories (SF-6 to SF-11).

**ii)** The seats between sub-categories SF-4(a), SF-4(b), SF-6(a), SF-6(b) and SF-9(c) are inter-transferable, whenever considered necessary by the University.

## 5.2(iii) Admission Under More Than One Categories

Candidates applying against more than one category under Self Finance Scheme may only deposit Self Finance Fee for any one category. In case of difference in amount of Self Finance, the highest amount needs to be deposited.

## 5.2 (iv) Transfer of Seats

(a) If the number of candidates in Arts, Commerce and Pre-Medical groups selected for admission under categories from SF-2 to SF-4 falls short of the allocated number of seats, after admission and waiting lists have been considered, the balance number of seats in each of these categories will be transferred to respective categories reserved for pre-engineering group. Any further balance seats from categories SF-2 to SF-4 as well as all balance seats in other categories SF-5 to SF-11 will be transferred as under:

(b) Any seat remaining vacant from any category at Thar Institute of Engineering, Sciences and Technology (TIEST) will be transferred to Mirpur Khas Board. Any further vacant seat will be inter-transferable with other categories wherever considered necessary by the University.





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# CHAPTER 6

## *Mode of Admission*



## 6.1 ADMISSION IN FIRST SEMESTER

### 6.1.1. Reporting in Person

Applicants whose names appear in the Merit list should personally report for Submission of documents and Medical Fitness Test at Admission Office on the date and time specified for reporting, according to the schedule, provided by the University.

### 6.1.2 Documents Required

Candidate for admission must submit the following documents as mentioned against each of them, to the Admission Office:

- Admit Card of Pre-Admission Entry Test Attested Photocopy
- S.S.C. or Equivalent Examination Mark sheet and Certificate Attested Photocopy
- HSC or Equivalent Examination Mark-Sheet Original - to be retained by the University
- Equivalence Certificate from IBCC for Foreign Examination; if applicable Original - to be retained by the University
- Domicile; Original - to be retained by the University
- Affidavit of non-political activities Original
- Three Passport Size Photographs
- Hafiz-e-Quran Sanad-; if applicable Original
- Migration Certificate (except Karachi Board) Original

Original documents retained by the University will be returned after the completion or termination of the studies at this University.

**Applicants are warned that in their own interest they should retain sufficient number of attested photocopies of their documents/ certificates as the originals are not likely to be returned during their period of study at the University.**

The name of applicants who do not submit the original documents on the specified scheduled dates for each category, shall stand deleted from the Merit List. No plea whatsoever shall be acceptable in case any applicant fails to appear on the scheduled date.

### 6.1.3 Medical Fitness Test

Each candidate shall be examined for Medical Fitness being offered admission in this University. For Medical Fitness Test candidates shall have to:

- Deposit Rs.1,200/- (Rupees One Thousand and Two Hundred only) with the NBP and HMB, NED University Branches along with Admission Fee, and
- Produce Bank deposit slip to the Principal Medical Office (PMO) of the University along with Chest PA view X-Ray, two passport size photographs and attested photocopy of

Matriculation Certificate. In case of foreign examinations candidate's proof of date of birth should be produced.

NOTE: The applicants, who fail to appear for medical examination on the specified scheduled dates as notified for the respective category, shall stand deleted from the Merit List. No plea whatsoever shall be acceptable in case any candidate fails to appear on the scheduled date.

### 6.1.4 Medical Fitness

- The eyesight, aided or unaided, should not be poorer than 6/9 in one eye and 6/12 in other eye while near vision should be N5 at least with glasses.
- The chest expansion should not be less than 4cm and X-ray of chest should be satisfactory.
- The limbs, including the feet and toes, should be well formed and developed with perfect and unrestricted movement of all joints.
- The candidate should not suffer from any remarkable skin disease.
- Colour blindness—even if vision is otherwise normal—will disqualify applicants for the disciplines of Mechanical, Electrical, Computer & Information Systems, Textile, Industrial & Manufacturing, Electronics and Telecommunications Engineering. Candidates may, however, be considered for other disciplines.

### 6.1.5 Interview & Admission

- Candidates would then be required to appear for Interview before the Admission Committee to choose the discipline from the available seats in their respective category. The selection of Discipline/ Programme is based on a computerized interactive process. **The choice of available seats would decrease as one goes down in the order of merit** and each candidate will have to make "on-the-spot" choice from the seats available. **To assist the candidate in making the decision he/she may bring his/her parents (or guardian) on the day of interview.**
- If the candidate decides to get admission, then he / she shall be required to
  - Pay the following amount either in cash or through Pay Order in favour of Director of Finance, NED University, which should have been acquired earlier.
    - Rs.60,000/- for all Engineering programmes and BS (Computer Sciences)
    - Rs. 61,500/- for candidates being admitted in Architecture Department



- Rs. 64,000/- for candidates being admitted in all remaining BS programmes. Those admitted in BS (Industrial Chemistry) shall be required to pay Rs. 65,000/- (including Rs.1000/- as Bench Fee)
- Rs. 75,500/- for candidates being admitted in BS computer Science Programme offered at TIEST.

**NOTE: Merit/Need Scholarship shall be awarded to the deserving newly admitted students by the University.**

- b) Submit a declaration of non-participation in political activities and non-indulgence in unwanted activities on Non-Judicial Stamp Paper of Rs.50/.
- iii) If the candidate is unable to attend the interview in case of 'exceptional circumstances' he/she may authorise any person, **preferably a parent**, to come on the interview day and take decision on behalf of candidate. The person so authorized shall have to complete all formalities required by the University regarding admission process. Candidates who expect to face 'exceptional circumstances' should contact the Chairman Admission Committee after the Medical Fitness Test.
- iv) A Candidate applying under more than one category- once admitted in any category will automatically forego his / her preference and candidature under other categories.
- v) The name of candidates who do not appear for medical, do not submit the original documents and/ or fail to appear for interview / Admission on the specified scheduled dates for each category, shall be deleted from the Merit List. The candidate may, however, appeal, giving justification for non-appearance on the scheduled date for consideration about inclusion in subsequent Merit List to be issued.

### 6.1.6 University Identity Card

Candidates who are admitted shall be issued University Identity Cards. All students are required to carry and produce original University Identity Cards whenever required.

## 6.2 EMPLOYMENT / SIMULTANEOUS ENROLMENT

All undergraduate degree programmes are regular full-time day programmes. No student admitted in this University shall be allowed to engage himself/ herself in employment or maintain simultaneous enrolment in any other course of studies in other educational institutions. Violation of above may lead to cancellation of admission.

## 6.3 CANCELLATION / WITHDRAWAL OF ADMISSION

The Vice Chancellor will be competent to cancel or withdraw admission of any candidate.

## 6.4 MEDIUM OF INSTRUCTIONS

The medium of instructions and examinations shall be English.

## 6.5 ADMISSIONS IN SUBSEQUENT SEMESTER/ YEARS OF STUDY

- 6.5.1 Admission in any Semester shall be allowed only during first three weeks after commencement of classes of that Semester.
- 6.5.2 Admission in Spring Semester of any Year shall be open to any student who was registered in the Fall Semester of that Year. Similarly, admission in Fall Semester of any Year shall be open to any student who was registered in Spring Semester of the preceding Year.
- 6.5.3. a Any student who fails to obtain at least 2.0 CGPA in First year Fall Semester shall remain on probation during First year Spring Semester. In any case, if such student still has less than 2.0 CGPA at the time of registration in Second year Fall Semester, he/she shall proceed to second (and last) probation during that semester. Such student shall be allowed to register for the regular courses as well as any backlog courses within the maximum limit defined in clause 6.7.3.
- b Any such students who after being in second probation have obtained more than 1.0 CGPA but less than 2.0 CGPA shall not be allowed to register in subsequent semester. He/She will be required to improve his/her CGPA up to 2.0 before being allowed to register in subsequent semester with junior batch.
- c Along with CGPA, the student shall also be required to fulfill the following conditions:-
- i) For admission in Third Year, the student must have passed all courses of the First Year, OR 80% of the courses up to the Second Year.
- ii) For admission in Fourth Year, the student must have passed all courses up to the Second Year, OR all courses of the First Year and 90% of the courses up to Third Year with at least 1.7 CGPA.
- iii) For admission in Fifth Year, the student must have passed all courses up to the Third Year, OR all courses up to Second Year and 90% of the courses up to Fourth Year with at least 1.7 CGPA.



6.5.4 In all circumstances, re-admission to any student shall only be granted in the semester where the student has discontinued his/her study due to any reason.

6.5.5 a) A student admitted in any Semester shall be registered in all such courses prescribed in that Semester which the student has not passed earlier.

b) In any Semester, the student shall be allowed to register in maximum of seven theory courses in total including the additional courses.

c) Registration in any additional course(s) offered for any junior batch(es) in the Semester may also be allowed by the Chairperson of the Department concerned in the following cases subject to payment of prescribed fees:

i) If the student has been admitted in Second Year Fall Semester on migration basis and consequently required to pass (additional) course(s) of First Year in which he/she is not eligible for exemption.

ii) The student having been allowed change of discipline is required to pass such course(s) in which either transfer of credit has not been allowed or the student has not studied the course(s) earlier.

iii) The student having been allowed to register any course(s) in which he/she had failed earlier.

iv) The student's request for registration in any course(s) as permissible under Para 6.10 for grade improvement.

## **6.6 ADMISSION ON MIGRATION BASIS**

Admission on migration shall be allowed in relevant discipline under extra ordinary circumstances subject to the following conditions:

a) Seat(s) is available in relevant discipline.

b) Applicant must have passed First Year of studies completely in the institution where he/ she was initially admitted.

c) Admission shall only be offered in Second Year (Fall Semester).

d) Applications for migration shall be called in the month of September on prescribed form which is required to be submitted along with processing fee of Rs. 1,500/-

e) Candidates offered migration shall be required to pay non-refundable migration fee of Rs. 740,000/- (Rupees Seven Hundred Forty Thousand Only) through pay order in favour of Director Finance, NED University.

f) Student admitted on migration shall be given exemption in all such courses of First and Second Year which he/ she has passed during study in previous institution. However, he/ she shall be required to register and pass all such courses of the discipline in which he/ she is offered admission which he/ she has not studied in previous institution.

## **6.7 DURATION OF PROGRAMME**

6.7.1 Courses of studies leading to the degree of Bachelor of Engineering (BE) and Bachelor of Sciences (BS) shall be of four (4) academic years' duration.

6.7.2 Courses of studies leading to degrees of Bachelor of Architecture shall however be of five (5) academic years' duration.

6.7.3 Any student who fails to complete all requirements for his/her degree in the prescribed time may continue study for further three academic years. Consequently, including the academic year of his/her first admission;

a) Maximum seven academic years shall be allowed for each Four-year degree programme.

b) Maximum eight academic years shall however be allowed for each Five-year degree programme.

c) i) Any student admitted in second year on migration basis shall have one year reduced from maximum allowable period.

ii) Any student admitted in third year on the basis of B.Tech. Conversion Programme shall have two years reduced from maximum allowable period.

## **6.8 CANCELLATION OF ADMISSION/ENROLMENT**

6.8.1 Admission of any such student of First Year of Studies in any discipline shall be cancelled who is not a candidate for the Fall Semester Examination.

6.8.2 Admission of any such student of any Year/ Semester who has been rusticated from the University on account of serious breach of discipline for any specified period shall be cancelled and notified. However, after expiry of the period the student may be allowed readmission in the same Year/ Semester with junior batch, if otherwise eligible.

6.8.3 Admission and enrolment of any such student of any Year/ Semester who has been expelled from the University on account of major breach of discipline shall be cancelled after due process and subsequently notified. The student shall not be eligible for any subsequent admission in the University.

6.8.4 Admission and enrolment of any such student shall be cancelled:

i) who after being on second probation during Second Year Fall Semester fails to obtain atleast 1.0 CGPA on completion of that semester.

ii) who without information fails to register in any Semester even after passing of the permissible registration duration.



## **6.9 WITHDRAWAL FROM SEMESTER/PROGRAMME**

6.9.1 Withdrawal from any semester or programme may be allowed only in extra-ordinary circumstances. Withdrawal from First Year Fall Semester shall not be allowed.

6.9.2 The student shall be required to apply for withdrawal through concerned Chairman along with evidence supporting his/her request for withdrawal.

6.9.3 Any such student(s) seeking readmission after withdrawal shall only be considered for readmission with junior batch provided that:

- a) The applicant has officially withdrawn earlier from the semester or programme.
- b) The period of discontinuation of his studies does not exceed three academic years.
- c) He / She produces an Affidavit on Stamp Paper of prescribed amount declaring that during the period of his/her discontinuation of studies he/she was neither on the roll of any other Educational Institution nor was convicted by any Court of law.

## **6.10 GRADE IMPROVEMENT**

6.10.1 a) Any student may be allowed by the Chairperson of the Department concerned to repeat course(s) offered in that semester in which he/she has obtained grade point lesser than 2.0.

b) The student will be allowed to register in such courses at any time, if simultaneously admitted in any other semester/ year of study and the maximum number of courses shall be in accordance to Para 6.5.5.(b)

c) The student may however register in the course(s) as and when offered.

d) Better grades in course(s) shall be considered for determining his/her GPA/CGPA.

6.10.2 Any student who is eligible for award of degree under Para 7.7 (Chapter 7) but still desires to improve CGPA for any reason may be allowed by the Chairperson of the Department concerned, subject to the following conditions:

- a) No provisional certificate/ degree has been issued to him/her.
- b) Duration of completion for the degree does not exceed the maximum limit described under Para 6.7.3.
- c) The student requests registration in desired courses within two weeks after announcement of his/her result.







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# CHAPTER 7

## ***Examinations***

## 7.1 SEMESTER EXAMINATION

Semester Examinations are held followed by each semester. Schedule of such examinations shall be as notified by the Examinations Department.

## 7.2 CLASS ATTENDANCE

7.2.1 Any candidate, who registered during the semester, will be allowed to appear only in such course(s) in which his/her attendance is at least 75% during the semester.

7.2.2 Any candidate, who registered during the semester, will be allowed to appear in all such courses of the semester provided his/her aggregate attendance in all such courses is at least 75% of the total of all classes held in the courses during the semester.

## 7.3 ADMIT CARD

7.3.1 Admit Card for the examination shall be issued to any candidate who is eligible / allowed to appear in the course(s) as mentioned on his/her Card.

7.3.2 The Admit Card must be in possession of the candidate while appearing in the examination for any course for which he / she has been allowed.

## 7.4 GRADE POINTS

Grade / grade point equated with percentage of marks and other grades shall be as follows:

Grade	Grade Point	% Marks	Remarks
A+	4.0	94 – 100	Extra Ordinary
A	4.0	85 – 93	Excellent
A-	3.7	80 – 84	} Very Good
B+	3.4	75 – 79	
B	3.0	70 – 74	
B-	2.7	67 – 69	Above Average
C+	2.4	64 – 66	Average
C	2.0	60 – 63	Satisfactory
C-	1.7	57 – 59	Adequate
D+	1.4	54 – 56	} Pass
D	1.0	50 – 53	
F	0.0	Below 50	Fail
P	-	50 – 100	Pass in non-credit course
IP	-	-	In progress*
X	-	-	Exempted
I	-	-	Incomplete
W	-	-	Withdrawal
WU	-	-	Withdrawal Unofficially

\* To be evaluated in Spring Semester for Final Year project or any specified Design course

## 7.5 GRADE POINT AVERAGES

Grade Point Average (GPA) for any semester and Cumulative Grade Points Average (CGPA) for more than one semester shall be calculated as under:

$$\text{GPA/CGPA} = \frac{\sum (\text{credit hours of a course} \times \text{grade point})}{\text{Total credit hours of the courses}}$$

## 7.6. MARKS DISTRIBUTION

Marks distribution for each final examination and sessional evaluation shall be as under:

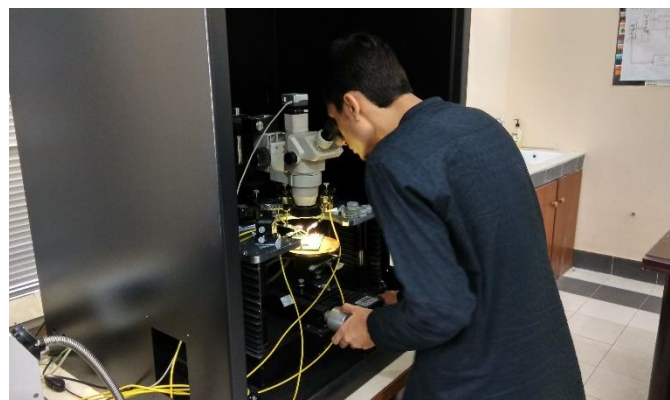
Each theory paper, practical, design course (studio work) and Final Year project shall have 60% marks for final examination and 40% marks for sessional evaluation.

## 7.7. AWARD OF DEGREE

7.7.1 Any student who was admitted in First Year and has passed all courses as prescribed for his/her Discipline with CGPA of at least 2.0 shall be eligible for the award of Degree in that Discipline.

7.7.2 Any student who was admitted directly in Second Year on migration from any recognized Institution and has passed all courses as prescribed for that Discipline with CGPA of at least 2.0 shall be eligible for award of a Degree in that Discipline. The course(s), if any, in which the student was allowed exemption on the basis of having studied the course(s) in the former Institution shall not however be counted for determining his/her GPA/CGPA.

7.7.3 Any student who was admitted directly in Third Year on the basis of B. Tech (Pass) conversion programme of this University and has passed all courses of Third Year onwards as prescribed for that Discipline with CGPA of at least 2.0 shall be eligible for the award of Degree in that Discipline.





# CHAPTER 8

## ***Fee Structure***



## 8.1 FEE AND CHARGES (NON-REFUNDABLE)

### 8.1.1. For Main Campus, LEJ and City Campus

- a) Admission Fee to be paid once at the time of Admission  
For locals  
In BE, BS (CS) and B. Arch Rs. 34,500/-  
In all remaining BS Programmes Rs. 29,500/-  
For Foreigners Rs.309,120/-
- b) Following fee and charges to be paid at the start of each semester:
- i) Semester (Tuition & Examination) Fee:
- For all BE, BS (CS) and B Arch programme \*Rs.20,890/-
  - For all remaining BS programmes \*Rs.29,890/-

**Note: All deserving candidates are paid scholarship against tuition fee from Merit/Need based Scholarship subject to the availability of funds.**

- ii) Students Facilitation Charges \*Rs.4,610/-
- iii) Studio Fee (For Architecture Department only) \*Rs.1,500/-
- iv) Bench Fee (For BS Industrial Chemistry only) \*Rs.1000/-
- c) If applicable, fee (Tuition and Examination) for one course \*Rs. 5,500/- (\*subject to revision).

### 8.1.2. For Thar Institute of Engineering, Sciences and Technology (TIEST)

- a) Admission Fee to be paid once at the time of Admission: Rs. 40,500/-
- b) Following fee and charges to be paid at the start of each semester:
- i) Semester (Tuition & Examination) Fee \*Rs.27,050/-

**Note: All deserving candidates are paid scholarship against tuition fee from Merit/Need based Scholarship subject to the availability of funds.**

- ii) Students Facilitation Charges \*Rs.7,950/-
- c) If applicable, fee (Tuition and Examination) for one course \*Rs. 5,500/- (\*subject to revision).

## 8.2 CHARGES UNDER SELF-FINANCE SCHEME

- a) Self-Finance Fee must be paid in designated branches of the bank and copy of receipt/ challan enclosed with application form; which shall not be refunded if admitted under the scheme on payment of Fee and Charges mentioned in Para 8.1 above.
- i) Categories SF-1 to SF-5 Rs. 740,000/- for all disciplines.
- ii) Categories SF-6 to SF-11 Rs. 940,000/-

- iii) Candidates applying against more than one category under Self Finance Scheme may only deposit Self Finance Fee for any one category. In case of difference in amount of Self Finance, the highest amount needs to be deposited.

## 8.3 SECURITY DEPOSIT

Security deposit of Rs.11,000/- is included in the admission fee to compensate breakage and or any other damage, if any, caused by the student. This deposit or such balance as may be available out of it, shall be refunded to the student whenever he/she ceases to be student of the University.

## 8.4 MISCELLANEOUS FEE

	Ordinary	Urgent
a) Mark Certificate	Rs. 600/-	Rs. 1000/-
b) Transcript	Rs. 700/-	Rs.1,500/-
c) Issuance of Degree	Rs.2,000/-	Rs.4,000/-
d) Issuance of Duplicate Degree	Rs.6,000/-	Rs.12,000/-
e) Provisional Certificate	Rs.1,500/-	
f) Re-totaling of Answer Book (per script)	Rs. 800/-	

## 8.5 HOSTEL CHARGES

(No boarding will be provided by the University; however, canteen facilities are available. Karachi resident are not eligible)

### (a) Room Rent

- i) Cubicle Rs.900/- per month
- ii) Dormitory Rs.700/- per month

### (b) Service Charges Rs.900/- per month

### (c) Hostel Security Deposit (Refundable):

- i) For Locals Rs.3,000/-
- ii) For Foreigners Rs.15,000/-

**Note: All hostel charges will be taken in advance on semester basis.**

## 8.6 OTHER EXPENSES

The student may find it convenient to own some books of fundamental nature which help him not only in the First Year but throughout his/her stay at the University and even beyond. Judicious purchase of such books with the guidance of his/her teachers is recommended. An outlay of about Rs. 10,000/- in the first instance for books and stationery should generally be adequate. In addition, he is expected to own drawing instruments, scientific calculator and sets of tools which may require additional Rs.6,000/-.





## CHAPTER 9

# *Scholarships Stipends And Awards*

## 9.1 ASSISTANCE SCHOLARSHIP

- The Assistance Scholarship is awarded subject to availability of funds to provide monetary assistance to needy students and is of the value of Rs.5000/-per annum.
- The Vice-Chancellor shall have the discretion to select students for award of Assistance Scholarship by taking into consideration the financial and other circumstances, the academic record and conduct of the students.

## 9.2 SCHOLARSHIPS

Various Scholarships are available for the meritorious and deserving students of this University. Previous year, approximately 1029 Scholarships (Higher Education Commission (HEC) / Private / Government Funded Scholarships) have been disbursed to the students of different disciplines.

**Note: Absence from or failure in a University Examination, lack of progress and assiduity in studies, breach of discipline or reprehensible conduct shall entail the loss of scholarships granted to any student.**

## 9.3 MERIT GOLD MEDALS & CERTIFICATES

- A Merit Gold Medal will be awarded by the University to each student securing the first position, in order of merit at the final B.E. Civil, Civil (specialization in Construction), Urban, Petroleum, , Mechanical, Textile, Industrial & Manufacturing, Automotive, Electrical, Electronics, Telecommunications, Computer Systems, Chemical, Material, Metallurgy, Polymer & Petrochemical, Software, Biomedical and Food Engineering.
- A Merit Gold Medal will be awarded by the University to such student securing the first position, in order of merit, at the final BS Management Sciences, Textile Sciences, Computer Science, Computational Finance, Industrial Chemistry, Applied Physics, Development Studies, English Linguistics and Economics and Finance Examination.
- A Merit Gold Medal will be awarded by the University to such student securing the first position, in order of merit, at the final B. Arch. Examination.





# CHAPTER 10

## ***Supporting Infrastructure and Students Facilities***



## **10.1 ENGR. ABUL KALAM LIBRARY**

Since its inception in 1921 in the City Campus, this library <http://library.neduet.edu.pk> has grown to become one of the leading academic libraries particularly focusing engineering sciences and technology of the country. The library devotes considerable efforts and resources to the development of an outstanding library collection to meet the needs of the students, teachers and researchers and serves as the regional reference library of engineering and technology. Services and facilities of the library are governed by the library regulations.

Engr. Abul Kalam Library comprises of two buildings adjacent to each other. The reference and administration building consists of three floors having a seating capacity of 800 users at a time. The building adjacent to this comprises of two floors with Circulation Section on the ground and Book Bank on the first floor. Departmental libraries have also been setup in remote campuses, City Campus and LEJ Campus as well as in the main campus departments.

Library collection is the blend of traditional information resources and scholarly electronic resources. The collection includes:

- General circulation books which include text books
- Reference books including encyclopedias, handbooks, dictionaries, manuals etc.
- Periodicals on current lists of subscription as well as volumes of back issues of local and international scholarly journals; magazine and newspapers
- Government documents & Archive material including Acts and Ordinances, Services Rules, Statistical reports, Census reports, Survey reports, Planning reports and Budgets etc.
- Non book material, CD-ROMs, DVDs etc.
- Digital content including databases of E-Books, E-Journals and E-Thesis etc.
- Users can also facilitate through Dspace e-repository.

Reference Section provides reading/ reference services to its members and users. Books and reference material including audio visual material, periodicals and government documents are restricted to be used within the premises and the collection is secured against theft using state of the art security system based on RFID.

The library provides book lending services through the Circulation Section, Book Bank and Duty Society services to members. Circulation Section caters students, faculty members, researchers and other employees of the university. However, Book Bank issues text books at 10% of the cost of books for the entire semester to undergraduate students.

The library also conducts programme and Book Fair every year.

The library keeping pace with emerging technologies has its own Computerized Library Management System, Website, OPAC and Portal Services. Wi-Fi access points are also available to facilitate library users.

A computing facility comprising of 65 latest configuration computers provides digital services to its users such as access to E-Books and E-Journals through the National Digital Library Program of HEC, Internet facilities, Laser Printing, Scanning and CD/DVD Writing and Copying of reference material.

The library is committed to provide a pleasant, user-oriented learning environment for its users. Its mission is to make its resources available and useful to its users and to sustain and preserve a universal collection of knowledge for future generations.

## **10.2 INFORMATION TECHNOLOGY (IT) DEPARTMENT**

The University has its own Internet facility managed by its Information Technology (IT) Department (formerly Internet Centre) established in 1998-99. The Information Technology (IT) Department since its establishment has played a pivotal role in developing the varsity's I.T. infrastructure by providing robust Internet facility to its users within and outside of its campuses. The department is equipped with the state-of-the-art networking equipment and acts as a central IT hub providing services like Internet, Portal, Web, Network Operations and Support Services round the clock. Continuing the expedition in producing the best in the Country, this Department also hosts corporate training for its faculty and staff along with the video conferencing facility enabling its Faculty and Students to join the rest of the Engineering and Technological hubs of the world.

### **10.2.1 NETWORK & HARDWARE Internet Facility**

The IT Department is equipped with the state-of-the-art LAN/WAN equipment. The Optical Fiber core network provides Gigabit connectivity to all the departments terminating at the Cisco High-end distribution switches located at the IT Department. The department also functions as an ISP providing dialup and VPN connections to the University students, faculty and staff thus enabling them to also connect remotely from their home. At present the University boasts a bandwidth of 120 Mbps on PERN-2 (Pakistan Education and Research Network-2). Coping up with the ever-growing technology standards, the university has extended its services and infrastructure highlighted as under;





- NED University has transformed its network and data services by establishing its state-of-the-art Data Centre. The data centre comprises of 5 server racks along with 3 network racks. Capable to host 90 servers with 4.8Gbps bandwidth connectivity per rack. The sole aim is to provide efficient services while ensuring high standards.
- State of the art Optical Fiber LAN to every facility in the University.
- Robust high bandwidth connectivity for every connected user (upto 8 mbps).
- Deployment of HEC Smart University campus wide WiFi giving robust secure Broadband connectivity to the users (students, faculty and staff).
- NEDUET VPN for researchers and students giving secure access to HEC Digital Library and NEDUET Portal services.
- Establishment of NEDUET owned Metro-LAN thus connecting all its three campuses including Main, LEJ & City campus through its own dedicated Fiber Optic links hence creating a massive learning network that would facilitate every member of the varsity irrespective of their campus location.
- Deployment of Microsoft KMS server for the largest Microsoft volume-based license software installation.

### **10.2.2 Hardware Maintenance and Inventory**

Department also provides hardware and software support services in addition to managing hardware inventory and technical feasibility services.

### **10.2.3 Video Conferencing Facility**

This University has a centrally located Video Conferencing Facility Centre through which NEDUET connects to any part of the world, locally and Internationally to connect and communicate with video and voice facility for the arrangement of virtual classes (online classes), conferences, seminars, Internet meetings (video conferences) among multiple locations, as and when required. This facility is available round the clock.

### **10.2.4 Information Systems and Software Section**

The IT Department focuses on delivering state-of-the-art software using Agile Methodology with Faster Development time and uncompromising integrity, some of them are as follows; Undergraduate and Postgraduate Students Management System, Human Resource Management System, Attendance Information System, Shuttle Pass System, Hostel Management System, LTV Management System, Security Operations Management System, Statutory Bodies Management System, Academic Performance

Monitoring System, Scholarships Management System and Internship management system. A part from MIS several web based applications are also developed by IT department which are playing vital role in automation of some core university processes e.g. Online semester registration of undergraduate and postgraduate, online feedback collection of undergraduate and postgraduate and Online Admissions. This comprehensive and sophisticated development effort as a whole is termed as NEDUET Campus Management System (NEDUET-CMS). To access information contained within CMS, every employee and student on Intranet uses a front-end interface known as NEDUET Campus Portal. NEDUET Portal is a 24/7 service. Portal works on the principle of Single sign on for multiple applications with personalized, secure, and robust and role-based access management.

With the aim of facilitating Undergraduate students, Portal dedicated online Students Interface is enriched with the following features:

- Availability of Personal and Academic Profile
- Subject wise to-date Attendance Status
- Classes and Examination Schedules
- Special announcements from course Teachers
- Access to study material uploaded by course teacher
- Access to Personal letters issued from Registrar Office
- Availability of Portal Notice Board showing recent notifications and announcements from Registrar Office.
- Option to apply/track/withdraw online for the posted internships
- Semester registration details of regular and backlog courses
- Online feedback of course, teacher and learning resources

## **10.3 INSTRUMENTATION CENTRE**

A state-of-the-art Instrumentation Centre is functioning at the University which was established under a grant provided by the Higher Education Commission (HEC). Its capabilities include calibration of multi-meters, energy meters, circuit breaker testing, pressure/ temperature gauges, water quality, etc. The Centre has well equipped facilities and the necessary expertise for performing calibration activities, testing and analysis service, corporate training related to instrumentation, and design services for the local industry as well as other academic institutions in the country. Services of the instrumentation centre are subscribed by multinational and national companies operating in Karachi as well as other universities present across Pakistan. It also provides training to undergraduate and postgraduate students, and assists Undergraduate students in undertaking final year projects of various disciplines. In addition, it assists other University departments in their R&D activities as well. The Centre comprises of various well-equipped Laboratories such as Electronics and Signals Lab,





Pressure and Temperature lab, Equipment Testing Lab, Water Quality and Weight Lab and a Virtual Instrumentation Lab. In particular, the Virtual Instrumentation Lab is equipped with world renowned National Instruments' (NI) LabVIEW system which helps engineers in basic data acquisition and signal processing as well as more complex embedded monitoring and control applications. The NED University lays emphasis on efforts in contribution towards research and improvement in quality of its human resource by providing good and up-to-dated facilities for utilisation by its student, academicians and researchers. The Instrumentation Centre is one such effort.

The Centre comprises of various well-equipped Laboratories such Electronics and Signals Lab, Pressure and Temperature Lab, Equipment Testing Lab, Water Quality and Weight Lab and a Virtual Instrumentation Lab.

In particular, the Virtual Instrumentation Lab is equipped with world renowned National Instruments' (NI) Labview system which helps engineers in basic data acquisition and signal processing as well as more complex embedded monitoring and control applications. For formal classroom lectures, a small but well-equipped Training Facility also exists.

The NED University lays emphasis on efforts in contribution towards research and improvement in quality of its human resource by providing good and up-to-dated facilities for utilisation by its student, academicians and researchers. The Instrumentation Centre is one such effort.

#### 10.4 NED ACADEMY

With the rapid pace of development of knowledge, skills, tools and techniques in engineering, applied sciences and other professions, continuing education of working professionals in industry has become a vital need. To cater educational and professional training needs for continuous upgrading of working professionals, NED University established NED Academy initially as Centre for Continuing Engineering Education (CCEE) in 1998. The initial purpose of CCEE was to provide applied engineering education so as to comprehensively cater the needs of technical work force in their career progression. However, with the changing paradigms of knowledge, education, learning as well as integration of engineering knowledge with managerial & leadership skills, professional ethics, societal harmony, and the goals of sustainability and socio-economic development, a need was felt to form a much larger umbrella of outreach education and training at NED and thus NED Academy was established in 2008 with CCEE working as one of its Centres. Since then, aiming at the goal of professional excellence, NED Academy has embarked on a remarkable journey which promises ambitious learners belonging to any educational background and at any

professional level a chance to choose, broaden and enhance their careers. We endeavour to develop profiles in line with the hiring criteria of leading organizations. This aim is achieved with dedicated efforts, planning and execution by the human resources associated with this initiative.

Where NED University stands for quality, NED Academy stands for polishing this quality further on with additional credentials and skills. The opportunities provided through the courses offered by NED Academy ensure professional excellence for anyone who is ambitious with his life goals. NED Academy serves as a symbol of excellence regardless of the field that anyone chooses because it stands for not only technically sound education but also believes in creating profiles which are multi-talented and have the flexibility and depth to be oriented easily toward the ever-changing dynamics of professional deliverance.

The vision of NED Academy has been "Empowering for Professional Excellence" by developing and offering more and more market-based capacity building trainings for different cadres of audience with continuous updating/improvements as well as an integration with entrepreneurial spirit.

Having a clear goal of "Grooming Professional Leaders for Tomorrow" NED Academy has shown dedicated efforts to provide a platform to engineers and other professionals to learn to be more competent in their fields and to build a capacity to work with techno-managerial skills along with leadership skills to achieve their career goals and organizational development.

The objectives of NED Academy have been as follows:

- Updating professionals with state-of-the-art developments in engineering/sciences / technology/ engineering management / leadership skills/ Digital skills/ soft skills/ CAD & CAE skills/ linguistic/ entrepreneurship etc.
- Providing learning opportunities for working engineers and other professionals to enhance their exposure to knowledge, skills, tools and techniques with the objective of improving their career growth and making them globally competitive.
- Providing hands-on learning opportunities for vocational and technical trainings so as to improve industry employability and growth.
- Offering structured courses, certification programmes, international exam preparations, diploma programmes, postgraduate diplomas, nanodegrees and other programmes in market-oriented disciplines for creation as well as sustainable development of globally competitive human capital.



### Key Domains of NED Academy

NED Academy, a name of guaranteed excellence, is well aware of the challenges faced by graduates and professionals in real world. To assist them in conquering these hurdles, NED academy conduct series of programmes in various domains. Some of those are as follows:

- Leadership Trainings
- Managerial Trainings
- Executive Trainings
- Postgraduate Diplomas
- Undergraduate Diplomas
- Short Courses
- Professional / International Certifications
- Software Based Training / CAD / CAE
- Technical Courses / Hands-On Trainings / Diplomas / Vocational Trainings
- Youth Engagement and Development Programmes
- Entrepreneurial Development Trainings
- Undergraduate Trainings
- Soft Skills Trainings
- Corporate (In-House) Trainings

### Future Plans of NED Academy

- One of the master plan of NED academy is to incorporate a new wing, a new domain that would enable easy and convenient access to facilities of NED academy. With the advancement of technology, NED academy plan to develop NED Online. NED Online will highlight the reach of NED Academy beyond its boundaries and reach a wider audience by initiating online courses.
- NED Academy is looking forward to collaborate international certifications and skills testing agencies such as PMI, AACE, APICX, etc., in order to have indigenously designed certifications and skills testing mechanisms.
- NED Academy is endeavoring to create career awareness and guidance among youth and young professionals and various level of their professional journeys in order to develop a sustainable and meaningful impact on national economy by generating career insight as per the changing paradigm both locally as well as globally.

#### 10.4.1 Centre of Continuing Engineering Education (CCEE)

Centre for Continuing Engineering Education, the most active wing of NED Academy enables professionals to attain higher levels of research, teaching and industrial cooperation for technical leaders for constant learning by empowering them with the relevant knowledge, skills, techniques and technology base to help them outshine in their careers. It

brings together new practitioners, new technologies and new experiences for the mutual benefits of all concerned. CCEE regularly conducts short courses to update engineers, professionals with recent development in engineering, management, IT, Sciences. It provides opportunities for working engineers to improve their qualification to meet professional body's registration level after successful completion and to enhance their skills with the objective of improving employability.

#### 10.4.2 Centre of Professional Excellence – CoPE

Centre of Professional Excellence is another wing of NED Academy which has been already very active for the last 2 years and is serving graciously next to CCEE. It has shown great initiative by launching various successful certification programs, seminars and workshops. Initiated in 2016 on the premise that engineers and other professionals are getting challenged to be promoted to senior positions in their organizations because of lack of certain key skills, expertise and knowledge much needed to attain and sustain professional excellence particularly at leadership positions; since then, CoPE has been working to bridge this gap and make professionals equally competent for C-level positions. CoPE has mainly been focusing on accommodating professionals with International Certifications and In-house local Certifications in various disciplines. A large part of this Centre's focus is on providing high quality in-house certifications for those professionals who can't afford international certifications.

In addition to CCEE and CoPE, NED Academy is now taking initiatives in other pitches which include postgraduate diploma programs, professional certifications, entrepreneurship, vocational and technical trainings, skill-based courses, market-based short courses, industry-academia collaborative courses, thematic workshops and international seminars for enhancement of professional knowledge, skills and capacity in engineering and other fields for career enhancement.

### 10.5 COWASJEE EARTHQUAKE STUDY CENTRE

Cowasjee Earthquake Study Centre (CESNED) was established in 2001 after the devastating Bhuj earthquake. The Centre is currently administered by the Department of Earthquake Engineering. The objectives of this centre include (a) housing national and global data pertaining to earthquake; (b) to act as a centre for disseminating accumulated knowledge; (c) to respond to the emergency needs; and (d) be able to providing guiding principles for pre and post disaster earthquake mitigation. It has become a hub of the earthquake related activities with time. The vital role played by CESNED after the 2005 Kashmir earthquake led to its recognition as one of the two earthquake study centres in the Country.



### 10.6 SHAKE TABLE TESTING FACILITY

The Shake Table laboratory is a state-of-the-art facility which is available in the Department of Earthquake Engineering. The facility is used to simulate real time earthquake ground motion to record the dynamic response of a given structure placed on the table.

### 10.7 ADVANCED MATERIAL TESTING FACILITY

The Advanced Material Testing laboratory is a state-of-the-art facility which is administered by the Department of Earthquake Engineering. The facility is used to conduct full scale static and pseudo dynamic testing of various structural components of buildings and bridges.

### 10.8 PCB FABRICATION LABORATORY

A PCB fabrication Laboratory is available in the Department of Electronic Engineering. This is primarily for training under-graduate students in PCB fabrication technology. The laboratory is supported by PCB layout design software and auto routing software. The graduating students with this experience are expected to benefit in their professional field. The Laboratory is being used for fabrication of PCB for local requirement and possibilities of taking orders for external agencies is being examined.

### 10.9 PRODUCT DEVELOPMENT CENTRE

Additive manufacturing technologies, more commonly known as "Rapid Prototyping" or "3D Printing" have been used by design and manufacturing organizations for concept modeling and prototyping as well as for various applications such as jigs, fixtures, check gauges, and even as a bridge-to-tooling and low-volume end-use parts. Emergence of these technologies have led manufacturing organizations to reduce their product development cycle time and improve product quality and customization. Global acceptance and application of these technologies have put the manufacturing industries of Pakistan to face strong challenges in terms of high-quality product development processes.

The Product Development Centre (PDC) of NED University has been equipped with state-of-the-art equipment and tools that enable complete reverse engineering and additive manufacturing of products. The equipment available at PDC includes a Faro Arm and a Laser Scanner for reverse engineering of products and a Fused Deposition Modeling (FDM) machine to build parts directly from CAD data (i.e. tool-less manner). Different CAD packages are also used to complete the process of product development.

### 10.10. DIRECTORATE OF INDUSTRIAL LIAISON

The Directorate of Industrial Liaison (DIL) was established at NED University of Engineering & Technology in 1997. The prime objectives of DIL are to create and enhance the required University-industry Linkages in the form of various activities.

DIL is since then involved in arranging internships opportunities in vacations for students in different organizations/ industries.

DIL is engaged in collecting the topics of final year projects and arranging technical/ practical help from the industries related with the projects. In a number of cases the industries have assigned projects to the university students with competent advisors from their organizations to help the students.

DIL also promotes students to showcase their projects online and in Professional Expo Shows and Fairs, NED students have earned achievements and prizes in PAPS auto show.

In addition, DIL arranges on perpetual basis study visits for the students and faculty at various industries and organizations to get the practical exposure of the industry. DIL also provides assistance to the organizations/ industries in respect of Research and Expert engineering services through teaching faculty to address their technical problems.

DIL encourages the prospective Employers for "On-Campus" hiring and facilitate them to conduct Presentation, Tests and Interviews for recruitment. Many multi-national companies, some overseas employers', local business groups and Small and Medium Enterprises (SME) are availing such facilities on need basis.

DIL has recently embarked on developing Graduate Directories, arranging career fairs and pre-employment orientation programs for the graduating batches. DIL is also coordinating and motivating the students to participate in International University student level competitions, to name a few are: Shell Eco-Marathon, Solar Car Challenge, SAE Formula Car etc.

To foster and promote the engineering profession, the Directorate is representing NED on the Standing Committee on Science Technology of the Federation of Pakistan Chamber of Commerce & Industry (FPCCI) and the Think Tank Committee of the Institution of Engineers Pakistan (IEP).

DICE (Energy & Automotive) is a joint collaborative initiative of DICE Foundation and NED University of Engineering and Technology (NED UET), DICE-Energy provides a platform innovations and for collaboration among academia, industry, government, entrepreneurs and expatriates to integrate science, technology and policy solutions by solving industrial problems and



sharing of ideas for developing innovative products of the future. It also provides students and industry a chance to present their ideas and products to professionals and renowned personalities of the country.

DIL has signed Memorandum of Understanding with various Industries / organizations, Purpose of these MoU's is to create a long-term framework of collaboration, cooperation and development of strong linkage between industry and NED on training, consultancy, research and development or any other activity which is in the interest of both 'Parties'. The industrial collaboration and linkage would provide opportunity to students and faculty of NED for training, consultancy, R&D and exposure of professional practices while industry would be benefited in resolving their technical / managerial issues through local solutions. The collaboration would bring positive impact on environment and society.

DIL also organize department wise career counselling sessions that meets the need of the diverse groups university students by providing, engaging academically strong and experiential learning sessions in work readiness education and enhancing their communication and presentation skills according to their prospective career.

## **10.11 OFFICE OF RESEARCH, INNOVATION AND COMMERCIALIZATION (ORIC)**

The Office of Research, Innovation and Commercialization (ORIC) at NED University was established with an aim to provide strategic vision and operational support to the University's research activities. From its inception, ORIC is committed to play an active role in facilitating the University's research and encourage the faculty and students to contribute and share in promoting goal-oriented research activities. ORIC also aims to act as a catalyst for the transformation of knowledge towards invention and innovation and its subsequent commercialization leading to a positive impact on the welfare and well-being of our nation.

### **10.11.1 Objectives:**

Since its inception, ORIC has adopted its mandate to enhance the environment for all research commercialization and innovation activities:

Following are the core objectives of ORIC:

1. Developing the university's strategic research directions and policies
2. Increasing and diversifying research funding
3. Improving integration of research and education at all levels
4. Strengthening university-industry relationships
5. Promoting entrepreneurship and technology commercialization
6. Protecting University's intellectual property

### **10.11.2 Initiatives and Activities:**

In pursuance of the Vice Chancellor's directives for the management of research initiatives and programs, ORIC has worked to re-enforce the existing research and development activities at NED University. Many activities were planned and successfully executed for sustaining and improving the research, innovation and commercialization having an impact for the improvement of areas concerning economic, industrial and academic development and their accelerated advancements for achieving the national objectives. Some of these activities are outlined below:

### **10.11.3 Organizational Support:**

In order to maintain an environment conducive for the generation of knowledge and to provide recognition to individual inventors, encouraging the development and dissemination of useful inventions to society, ORIC has prepared drafts of University's Intellectual Property Policy and Collaborative Research Policy. Besides, ORIC has also developed a comprehensive NED-Research Eco System draft which presents a holistic overview of the NEDUET research and innovation activities and provides a guideline for technology development and its subsequent commercialization.

### **10.11.4 Lab Commercialization:**

For the commercialization of the laboratory facilities available within NED University, ORIC has launched a Lab Commercialization Program. Under this program ORIC is closely working research labs across the university such as High-Performance Computing Center, Research Center for Artificial Intelligence RCAI, 3D Printing Facility Lab. ORIC has also recently commercialized Scanning Electron Microscope for service provision to industry and students for research purposes.

### **10.11.5 Entrepreneurship Development:**

NED Entrepreneurship Society is operating under the umbrella of ORIC as a student wing that is dedicated to discover, engage and foster creativity and to bring up true entrepreneurial leaders from the university. Several activities took place in the previous year fueling of the entrepreneurial eco system to fully permeate our campus. A renowned campaign "The undiscovered entrepreneurs of NED University" brought NED's silent entrepreneurs into limelight. "From Silicon Valley to NED University", a talk was given by Mr. Idrees Kothari, an NEDian and serial entrepreneur from Silicon Valley. DICE Virtual Innovation Competition is being organized for the last two years in collaboration with DICE Foundation, USA. Various





promising projects came up during this event which is now in the process of development and commercialization. TEDx NED University was organized on the themes of capacity building of young innovators and entrepreneurs and several workshops and trainings organized within the same lines for the entrepreneurial Development.

#### **10.11.6 Workshops & Training:**

ORIC organizes several courses and trainings for the students and faculty members. ORIC with its collaborative partners INJAZ Pakistan offered Entrepreneurial Masters classes. ORIC also hosted Unilever Foundry for students offering them opportunities to partner with Unilever brands and functions and help them solve some exciting challenges. Dr. Umar Saif gave a lecture on “Role of Technology in Improving Governance & Entrepreneurial Landscape of Pakistan” and a notable NED’s alumni Safwan Shah gave a lecture on Entrepreneurship and explored principles and methods for initiating an entrepreneurial venture. To prepare young engineers with the time management skills, ORIC have been organizing workshops by Time Lenders to improve general skills of organizational behavior. Several workshops and courses are also planned for this year.

#### **10.11.7 Industry Linkages:**

It is a strong belief of ORIC that Industry-University collaboration can be mutually beneficial by combining the best academic thinking with the expertise of industry. There is a strong intent in the NED faculty and students to participate extensively in collaborative research programs with the industries. In order to establish and strengthen University-Industry collaborations to stimulate industrial research, ORIC has been engaged with different industries, organization and companies bringing projects in the university as per the industry needs for locally manufactured R&D solution and offering students with project apprenticeship.

#### **10.11.8 Business & Technology Incubation:**

To enhance innovative and entrepreneurial prowess of young graduates and to accelerate and encourage the successful development of entrepreneurial companies, ORIC has established a Business Incubation Center by the name of CINETIC - Center of Innovation, Entrepreneurship, Technology Incubation & Commercialization. Almost 8 startups graduated in the previous year and 11 startups and 6 campus companies operating currently at CINETIC. First batch has been successfully graduated while second batch of startups are in the middle of their process. This strategic step is aimed to facilitate new breed of young entrepreneurs to ensure their participation in the positive economic activities through pursuing startup companies. In

addition to generating a higher value addition for the nation’s economy, this step will help addressing the rising trends of unemployment and its threat to political stability, social unity and economic growth of our nation.

CINETIC provides its startup incubates with infrastructural support that includes office space, PCs, internet, telephone services apart from the basic printing, scanning and photocopier services. It also provides great networking opportunities, means to the access of financiers and lab access services. Excessive mentoring from the board of advisors on matters relating finance, marketing, legal and related matters are the part of the incubation program.

Upon realization of importance of protecting Intellectual Property rights not only for researchers but also for startups, ORIC has its own IP Office that provides consultancy to students and faculty in protect and processing their ideas and research legally.

#### **10.11.9 Campus Companies:**

Campus Companies is an initiative under ORIC that enables students to operate and establish their businesses in the boundaries of NED University, whilst providing services and products on-campus. In this regard, Cycle Yaari has been operating as an on-campus venture that provides smart and green transportation solution in the premises of NED University in the form of cycles. Open Mic, is another social venture that aims at fostering the culture of public dialogue and social inclusion amongst engineers. Book Cafe is an online bookstore also function as a novel reading library based out of CINETIC building. Students can buy books or take novels on rent. DIYNED Club and Being Student are recent campus companies operating vibrantly adding value to the student life at the campus.

#### **10.11.10 Maker Studio:**

To provide a platform for thinkers and creators and to facilitate collaboration and sharing of ideas across boundaries of disciplines, ORIC has launched Maker Studio. The initiative aims at creating an environment that fosters creative exploration of ideas. Inspired by MIT’s Fab Labs, Maker Studio enables multidisciplinary learning and development for students and faculty alike. The facility is available in the ground floor, CINETIC Building.

#### **10.11.11 Research Internship Program:**

This is a selective program that provides the interns with the opportunity to work on a research project with NED’s leading faculty and researchers in various engineering research domains as well as social sciences. ORIC seeks outstanding applications for the Research Internship Program in early start of the semester. The





student's research interests and competencies are matched with the faculty's research interneer need. The program is for a 100 day long period by the end of which ORIC Research Internship experience certificate is awarded to the accomplished interneers as well as the supervisors.

### **10.12 DIRECTORATE OF UNIVERSITY ADVANCEMENT & FINANCIAL ASSISTANCE**

Directorate of University Advancement & Financial Assistance was established at NED University of Engineering & Technology in May 2013. This Directorate is housed in Old VC Office (Second Floor). The basic objectives of establishing this Directorate were to:

- Achieve financial stability through fund raising
- Strengthen University Advancement Programme
- Strengthen the quality of academic programme
- Increase and enhance the visibility and awareness of the University to the community at large and to all stakeholders

In addition to above, the UA & FA seeks to help the students, faculty, staff, alumni and friends of the University to have pride and satisfaction in having connections to the University – today, tomorrow and in fact for lifetime.

### **10.13 MEDICAL DEPARTMENT**

Medical Department is located next to Humanities Department of this University and is administered by Principal Medical Officer, accompanied by a Senior Medical Officers at Main Campus, One Male and Two Male nurses and One Lady Medical Officer, all are posted at main Campus. One male and two female nurses are also assisting doctors for providing medical services

Two peripheral Medical sub centres are located at each LEJ and City Campus, paramedical staff is available at both campuses.

There are numerous diagnostics & therapeutic modalities available in Medical Department. Emergency/ routine Outpatient Department Service (OPD), Pathological, Radiological and Electrocardiographic and ambulance facilities are available, which free of charges for students.

Similarly, therapeutic support in the form of Airway, Breathing and Circulatory (ABC) assistance as well as Outpatient facilities are available at peripheral Medical Sub-Centers, i.e. City and LEJ Campus.

### **10.14 STUDENT AFFAIRS DEPARTMENT**

The Department of Student Affairs (DSA) is situated at first floor of Students Facilitation Centre with the aim to facilitate the students throughout their stay at this

academia through a wide range of activities, services and resources that are provided to students related with their academic, co-curricular and professional pursuits. DSA offers following services to the students:

- Provides scholarships to the deserving students through private funded donors, govt., etc as mentioned in Chapter 9.
- Student societies working under this department which organizes numerous activities and events as mentioned in chapter 11.
- Organizes various sports activities as mentioned at 10.15.4.
- Students are facilitated with bus passes on nominal charges as well as with concession on travelling fare for train and plane.
- Nine Canteens, six Photostat shops and one stationary shop are functioning under the supervision of this department to provide hygienic and quality food, photocopies and general stationary items on reasonable rates.
- Girls Common Room facilities (GCR) are maintained and furnished with necessary comfort for female students.
- DSA issues Clearance Certificate to outgoing students, and also facilitates the students by attesting academic documents of the students for PEC Registration and Higher Studies.

### **10.15 OTHER STUDENTS FACILITIES**

#### **10.15.1 Duty Society**

The Society gives interest free loans to the students in need of financial help. The terms of such loans and application forms may be obtained from the Secretary of the Society.

#### **10.15.2 Plain Paper Copiers**

Copies of documents can be obtained from PPC at nominal cost.

#### **10.15.3 Stationery Shop**

There is a University General Store on the Campus for meeting the general stationary requirements of the students. It works on a no-profit basis and is managed by a committee of members from the teaching staff.

#### **10.15.4 Sports Facilities**

Sports Section was established at NED University in 1978, that is functioning under the Control of Students' Affairs Department. The facilities provided by the section are:

- Boys Gymnasium
- Girls Gymnasium



- Squash Complex
- Two Out Door Basketball Courts
- One Tennis Court
- Cricket Ground with Turf Wicket
- Football Ground
- Boys Fitness Centre.

The Sports Section also organizes NED Interdepartmental Games and Inter Faculty Games every year for the Student of NED University, while, NED University teams participate in Intervarsity Championships that are scheduled under auspices of Higher Education Commission, Islamabad i.e. (Badminton, Basketball, Cricket, Table Tennis, Football, Volleyball, Squash & etc.).

#### **10.15.5 Hostel Facilities**

The University has two residential Hostels for boys situated adjacent to the Main Campus named: Muhammad Bin Qasim Hostel I & II and one Hostel for girls situated adjacent to the Staff Colony in Main Campus with the capacity of 35 Dormitory rooms and 20 cubicle rooms in MBQ-I Hostel and 72 Dormitory rooms and 48 Cubicle rooms in MQB-II Hostel whereas 20 dormitory rooms are in Girls Hostel. The hostel has the following common facilities: Common Room, Prayer Hall, Warden's

Office. The accommodation in the residential Hostels is mainly for non-residents of Karachi and is allocated on first come-first-serve basis. Fresh entrant for accommodation in the Hostel is required to apply online submission of application for Hostel admission is NOT Guarantee for allotment in the Hostel. Resident students are required to comply with all conditions of residence as prescribed by the University.

#### **10.15.6 Boys' Common Room**

The Boys' Common Room is provided with the facilities of indoor games, telephone and necessary reading material.

#### **10.15.7 Girls' Common Room**

A Girls' Common Room is also available. It is properly furnished with necessary comforts such as attached bath / powder room. A maid servant is also provided to the girls' common room.

#### **10.15.8 Transport**

Shuttle Bus transport may be provided by the University from convenient points. The places and charges are determined by the University and notified as such.





# CHAPTER 11

## *Students' Activity*





## 1.1 STUDENTS' SOCIETIES

The extra and co-curricular activities of students function under following societies:

- i) Society for the promotion of Science, Engineering and Technology (SENTEC)
- ii) Literary and Publication Society (LPS)
- iii) Debating Society (DS)
- iv) Member of Society of Arts and Intellectual Creativity (MOSAIC)
- v) Pakistan Society (PS)
- vi) Green Society (GS)
- vii) Girls Affairs Society (GIFT)
- viii) NED Photography Society (NPS)

Each society is supervised by a teacher as adviser. In addition, University sports are managed through Manager Physical Education.

## 11.2 STUDENT CHAPTERS OF PROFESSIONAL BODIES

Student chapters of following Professional Bodies are also established which organise events throughout the year:

- i) American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE)
- ii) American Society of Mechanical Engineers (ASME)
- iii) Society of Manufacturing Engineers (SME)
- iv) Society of Petroleum Engineers (SPE)
- v) American Concrete Society (NED University Chapter)
- vi) Institute of Mechanical Engineers (IMechE)
- vii) NED Materials Society (NMS)
- viii) Metallurgical Engineering Society (MES)
- ix) Society for Chemical Engineering (SCHEME)
- x) Society of Polymer & Petrochemical Engineers (SPPE)





# CHAPTER 12

## *Discipline*





## 12.1 GENERAL RULES

- i) All students of the University shall conform to the Rules and Regulations of the University and are under overall disciplinary control of the Vice-Chancellor.
- ii) Breach of rules, misconduct, irregularity in time keeping, idleness, lack or un-reasonable progress in studies etc., will render a student liable to disciplinary action including expulsion or rustication from the University. In this regard, the Vice-Chancellor is the sole and final authority.
- iii) Students who abstain themselves (for seven days at a stretch without notice) either from lectures or from laboratory work will not be allowed to resume their study until satisfactory explanation is submitted and accepted.
- iv) A student desirous of leaving the University must apply in writing and such application must be countersigned by the student's parent or guardian. Admission once cancelled shall not be restored.
- v) Students are strictly forbidden from forwarding applications, appeals or any other communication direct to any authority other than the Chairman of the Department or Vice-Chancellor and any contravention of this rule shall make the student liable for disciplinary action.
- vi) Students may be permitted to form or carry on only such associations or clubs as are provided under the Rules. Such associations or clubs must be open for membership regardless of religion, community or political opinion. In no circumstances will any association, the object or membership of which is directly or indirectly sectarian, ethnic or political, be permitted. No member of the association or club can invite any outsider in University without prior permission in writing from the Vice-Chancellor.
- vii) No functions are permitted to be held by the students in the University without prior permission in writing from the Vice-Chancellor.
- viii) The following among others, shall constitute acts of indiscipline for which action may be taken against the student or students.
  - a) Involvement in any political/ ethnic/religious disputes within University premises.
  - b) Creating law and order situation in the University premises.
  - c) Threatening /pressurising Faculty Members and/or Officers of the University inside or outside the University premises.

- d) Damaging or destroying University property.
- e) Teasing or harassing or molesting of students inside or outside Campus especially so in those of the opposite sex.
- f) Creating disturbances in Class Rooms/ Laboratories
- g) Attempting to bring any external pressures for passing examinations, exemption from attendance or any other purpose.

**Note:** Indulgence in any of the above acts, can result in appropriate disciplinary action which may be rustication or expulsion from the University either for specified period or for good or fines up to the maximum of Rs.20,000/=

- ix) Every student must be hanging their Identity Cards at the prominent place from where it can be visible all the time when they are in the premises.

No student will be admitted to the University unless he is in possession of the Identity Card. Duplicate Identity Card will be issued on a written request on the prescribed form on reasonable grounds, after payment of the prescribed fee.

- x) Vice-Chancellor's decision in all matters shall be final.

## 12.2 APPEAL AGAINST CANCELLATION OF ADMISSION

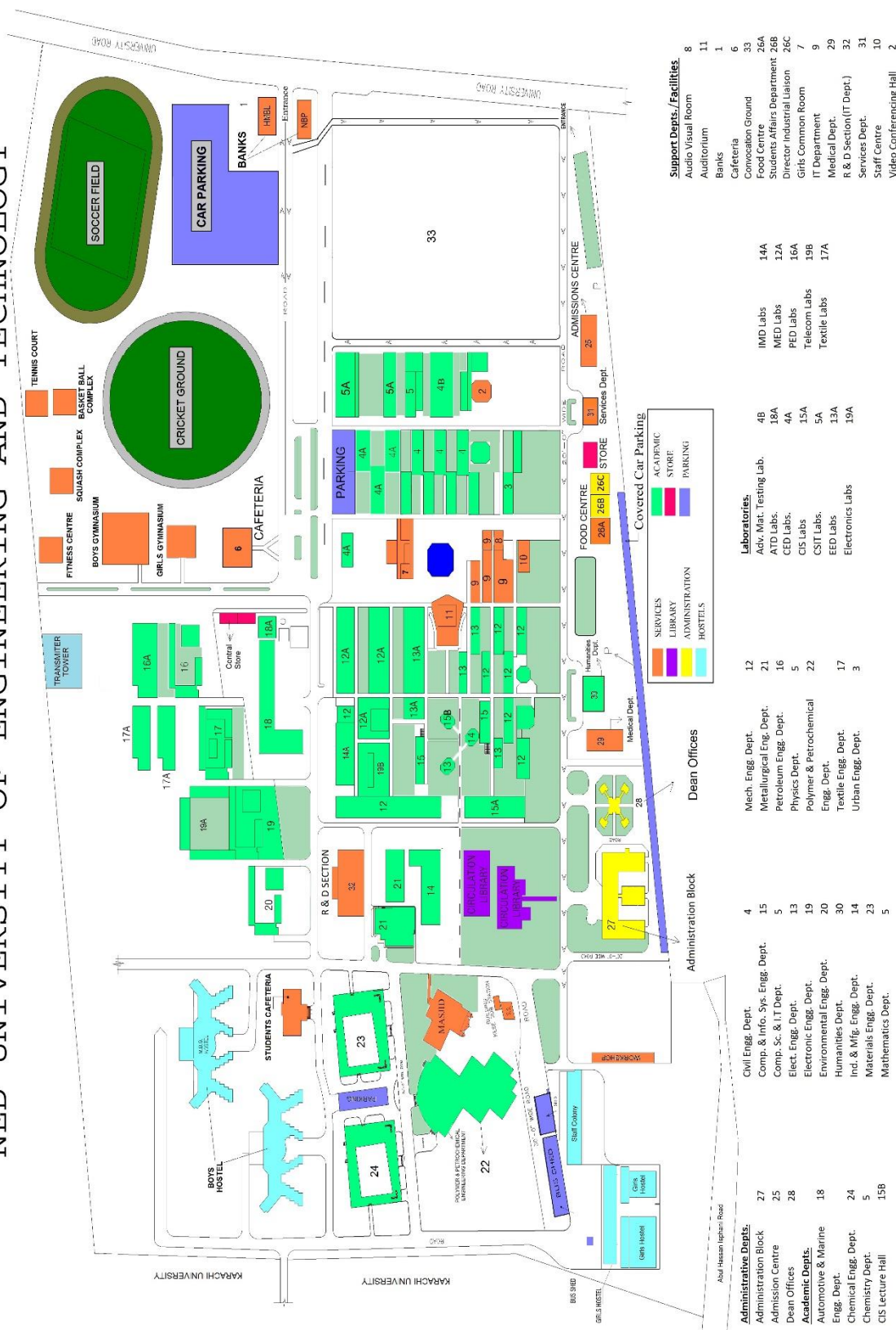
Candidates who are rusticated from the University on account of submission of forged documents at the time of their admission in this University may file appeals against such orders with the Vice Chancellor of the University within 15 days from the date of Notification alongwith a fee of Rs. 500/- (refundable in case the appeal is upheld). This provision is applicable to all students studying in this University or affiliated colleges irrespective of their First Year Batches.

## 12.3 LEAVE OF ABSENCE

- i) Under exceptional circumstances, students may apply for leave of absence to the Chairman of the Department who may sanction such leave for short periods but the grant of such leave will not be acceptable as a plea for not putting in 75% of the attendance which is a pre-requisite for being eligible to appear in the University examinations.
- ii) No student is eligible to sit for the University Examination unless he/she has at least 75% attendance at the Courses, Laboratory and Practical classes.

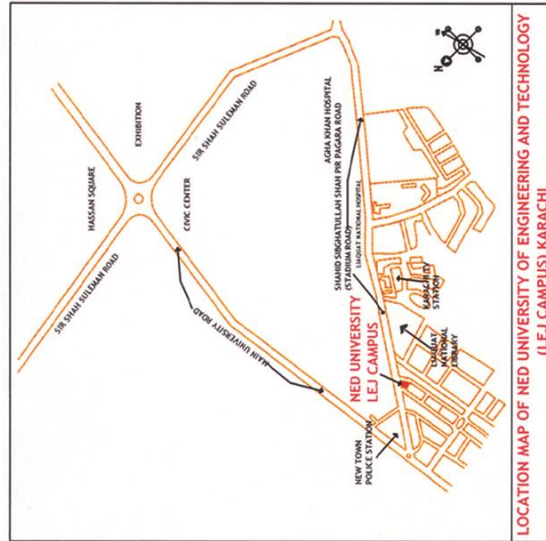


# NED UNIVERSITY OF ENGINEERING AND TECHNOLOGY



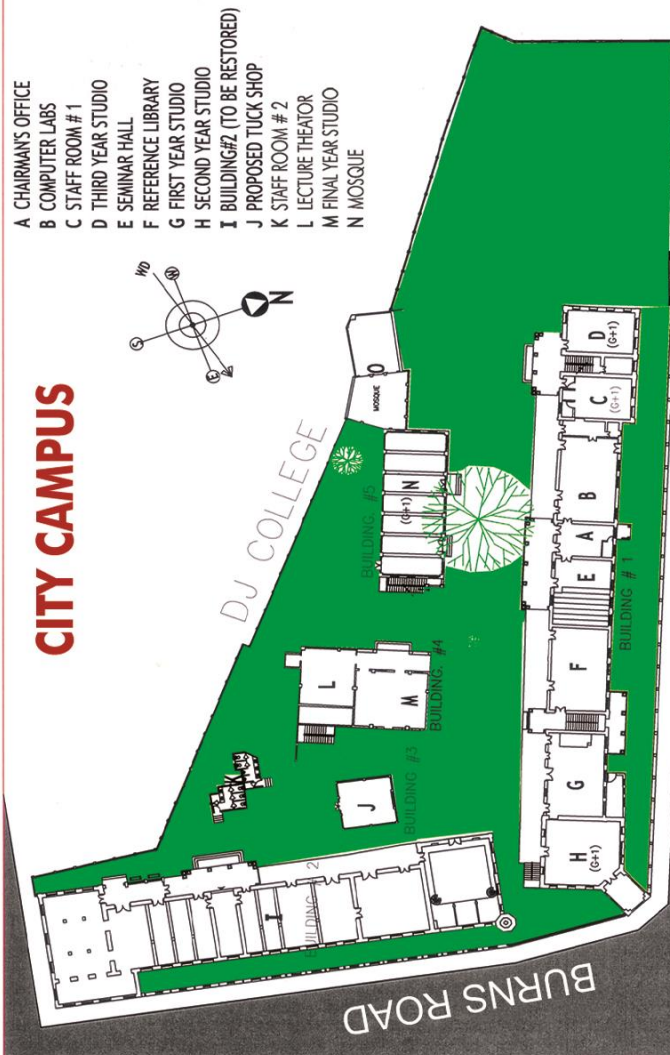


## LEJ CAMPUS



LOCATION MAP OF NED UNIVERSITY OF ENGINEERING AND TECHNOLOGY  
(LEJ CAMPUS) KARACHI

## CITY CAMPUS



MOULANA DIN MUHAMMAD WAFAI ROAD