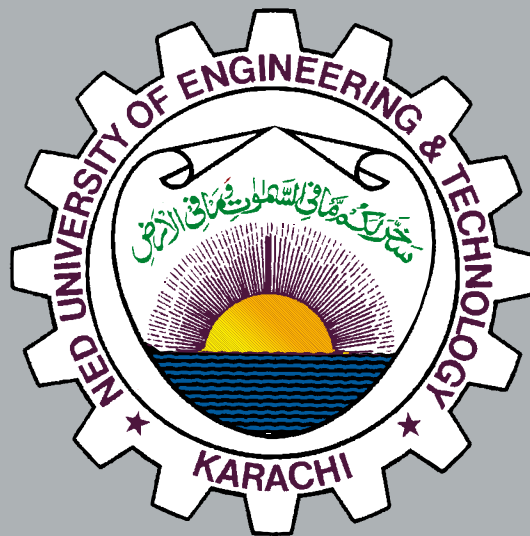


# NED UNIVERSITY

of Engineering & Technology



# PROSPECTUS

# 2019

## UNDERGRADUATE

# FOREWORD

NED University of Engineering & Technology, is one of the oldest and highly reputed engineering institutions in Pakistan. In recent Times Impact Ranking, NED University has been declared as the highest ranking university of Pakistan whereas it is placed among top 101 - 200 institutions of the World with its impact in Quality Education being at 80<sup>th</sup> ranking in the World. It has also been placed among the top 2.5 percent institutions in Asia by renowned and reliable QS ranking in their very recently announced ranking. There is a history of nearly one hundred years of unabated hard work and effort by administration, faculty and students which led to getting this status. The University is recognized throughout the globe for its quality education in engineering and allied disciplines. It has consistently maintained high standards in teaching and research which is necessary to prepare the graduates to face the challenges in their professional lives. The University is actively engaged with the industry and closely interacts with its alumni. Several State-of-the-art labs have been established in various departments in collaboration with the partner industries and the NED alumni. The newly established labs for which funding has been secured through competitive process are actively engaged doing research in most modern technologies.

The University has also initiated for establishing its constituent college namely 'Thar Institute of Engineering, Sciences and Technology' at Islamkot, Thar where some of the most demanding disciplines will be started. During this year, BS (Computer Sciences) will be launched at this campus. The University believes to provide its students, state of the art analytical, design and computing skills that underpin modern engineering practices, while encouraging their creativity and problem-solving skills that are so important for good 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 so as to enable them for being absorbed and adjusted in the industry where there is a need of these languages. 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.

Our students are trained 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**



**1. General Information**

- 1.1 Historical Background of The University 2
- 1.2 Administration & Academic Support 4

**2. Academic Programmes**

- 2.1 The Faculties 6
  - 2.1.1 Faculty of Civil and Petroleum Engineering 6
  - 2.1.2 Faculty of Mechanical & Manufacturing Engineering 6
  - 2.1.3 Faculty of Electrical & Computer Engineering 6
  - 2.1.4 Faculty of Chemical and Process Engineering 6
  - 2.1.5 Faculty of Information Sciences & Humanities 6
  - 2.1.6 Faculty of Architecture & Management Sciences 6
- 2.2 Teaching Departments 7
  - 2.2.1 Department of Civil Engineering 7  
(also Administering Bachelor of Engineering Civil with Specialization in Construction Engineering Programme)
  - 2.2.2 Department of Urban & Infrastructure Engineering 8
  - 2.2.3 Department of Petroleum Engineering 9
  - 2.2.4 Department of Earthquake Engineering 9
  - 2.2.5 Department of Mechanical Engineering 10
  - 2.2.6 Department of Textile Engineering 11  
(also Administering Bachelor of Science in Textile Sciences Programme)
  - 2.2.7 Department of Industrial & Manufacturing Engineering 12
  - 2.2.8 Department of Automotive and Marine Engineering 13
  - 2.2.9 Department of Electrical Engineering 14
  - 2.2.10 Department of Computer & Information Systems Engineering 15
  - 2.2.11 Department of Electronic Engineering 16  
(also Administering Bachelor of Engineering in Telecommunications Programme)
  - 2.2.12 Department of Biomedical Engineering 17
  - 2.2.13 Department of Materials Engineering 18
  - 2.2.14 Department of Chemical Engineering 18
  - 2.2.15 Department of Metallurgical Engineering 19
  - 2.2.16 Department of Polymer & Petrochemical Engineering 20
  - 2.2.17 Department of Food Engineering 20
  - 2.2.18 Department of Environmental Engineering 21
  - 2.2.19 Department of Software Engineering 21
  - 2.2.20 Department of Computer Science & Information Technology 22
  - 2.2.21 Department of Mathematics 23  
(Administering Bachelor of Science in Computational Finance Programme)
  - 2.2.22 Department of Physics 24  
(Administering Bachelor of Science in Applied Physics Programme)
  - 2.2.23 Department of Chemistry 24  
(Administering Bachelor of Science in Industrial Chemistry Programme)
  - 2.2.24 Department of Humanities 25  
(Administering Bachelor of Science in English Linguistics Programme)
  - 2.2.25 Department of Architecture 26  
(Administering Bachelor of Science in Development Studies Programme)
  - 2.2.25 Department of Economics & Management Sciences 27  
(Administering Bachelor of Science in Economics & Finance and also Administering Bachelor of Science in Management Sciences Programmes)

**3. Courses of Studies**

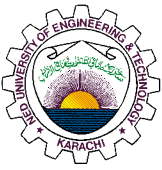
- 3.1 Engineering 30
    - 3.1.1 Civil Engineering 30
    - 3.1.2 Urban Engineering 32
    - 3.1.3 Petroleum Engineering 33
    - 3.1.4 Civil Engineering (Specialization in Construction Engineering) 34
    - 3.1.5 Mechanical Engineering 35
    - 3.1.6 Textile Engineering 36
    - 3.1.7 Industrial & Manufacturing 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 Programme 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
- 4. Mode of Application for Admission**
- 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
- 5. Admission Categories**
- 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                                    | 78 |  |     |
| 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  |
|  |    | 10.14.8 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



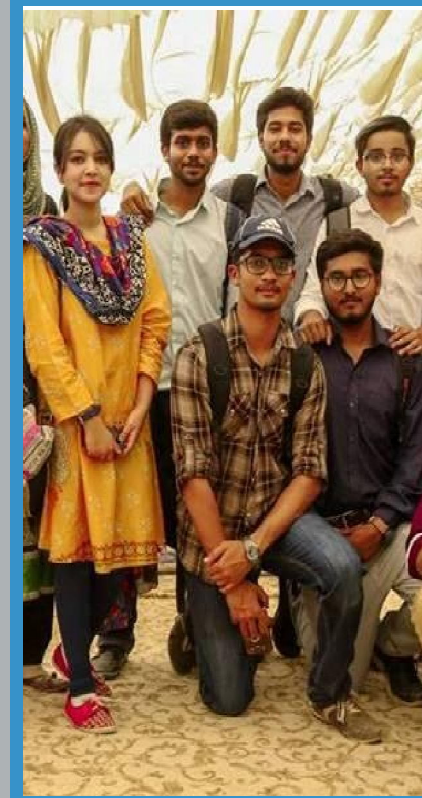
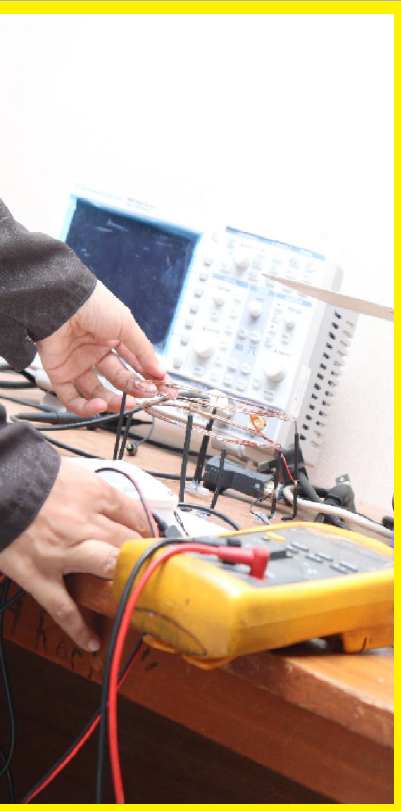






## CHAPTER 1

# *General Information*



PROSPECTUS **2019**  
*Undergraduate*





## 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 1922. The NED University is thus one of the oldest institution 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 finance 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 Mr. Nadirshaw Edulji Dinshaw, the new college buildings and laboratories were constructed on 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 1st 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

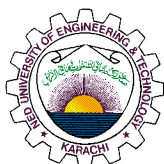
to shift the college from its location in the congested downtown area (where no expansion was possible) to a new site adjoining the University of Karachi. The project was carried out with the assistance of the World Bank which provided Rs.118 millions in two phases and the College was shifted to its new 40 hectare Main Campus in 1975.

On the 1st 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 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. Mir Shabbar Ali**

*B.E. (Civil) NED; M.S. (University of Oklahoma, USA);  
Ph.D. in Transportation; Uni of Birmingham, 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 Architecture & Management Sciences, Dean (AMS)

**Prof. Dr. Noman Ahmed**

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

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

**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 Chemical & Process Engineering, Dean (CPE) (Acting)

**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 Information, Sciences & Humanities, Dean (ISH) (Acting)

**Prof. Dr. Noman Ahmed**

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

### Registrar (Acting)

**Mr. Ghazanffar Hussain**

*M.Phil / PhD in progress (UoK);  
M.Sc. (Physical Chemistry) (UoK) (Gold Medal)*

### Additional Registrar (Academic)

**Syed Imtiaz Ahmed**

*M.B.A.; M.A. (Eco); M.A. (Islamic Studies);*

### Deputy Registrar (Academic-I) (Acting)

**Mr. Irfan Ali**

*M.A. (Economics)*

### Deputy Registrar (Academic-II)

**Syed Muhammad Tarique**

*M.A. (Economics)*

### Controller of Examinations (Acting)

**Mr. Safi Ahmed Zakai**

*B.E (Elect.) [NED]; MBA (Marketing) IBA Karachi;  
M.Engg (Telecom.) NED; M.Phil (Management) Uni of Karachi*

### Director of Finance

**Mr Muhammad Sajeeruddin**

*B.Com KU; L.L.B. KU; A.C.M.A. (Accounts) ICMAP;  
F.C.M.A. (Accounts) ICMAP.*

### Resident Auditor (Acting)

**Mr. S. M. Hassan Shamsie**

*B.Com KU; M.A. (Economics) KU*

### Director (Planning & Projects) (Acting)

**Engr. Ashfaq Ahmed Khan**

*B.Sc., B.Sc. Engg. (Civil)  
Member S.A.M.E. (U.S.A.); P.E.*

### Chief Librarian (Acting)

**Ms. Huma Sardar**

*B.Sc. (Microbiology) UoK; B.L.I.S. (Library and Info. Science) UoK;  
M.L.I.S. (Special Libraries) UoK*

### Director, QEC

**Prof. Dr. Asif Ahmed Shaikh**

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

### Director of Works & Services and Provost

**Engr. S Wasi Uddin**

*B.E. (Civil); M.Engg.(Env.)*

### Controller Student Affairs (Acting)

**Dr. Ali Hasan Mahmood**

*B. E. (Textile Engg); M. Engg (Textile);  
Ph.D. (Textile, The University of Manchester, UK)*

### Director Procurement

**Mr. Abdul Wahab**

*M.B.A. (Finance and Accounting)*

### Director Industrial Liaison (Acting)

**Dr. Muhammad Amir Qureshi**

*B.E. (Textile Engg.) [NED]; M.Engg. (Textile Engg.) [NED];  
Ph.D. (Heriot-Watt Uni) [UK]*

### Director, Information Technology Department

**Dr. Muhammad Asad Arfeen**

*B.E (Comp. & Info. Sys.); M. Engg (Comp. Sys);  
Ph.D. (Teletraffic Engineering) New Zealand*

### Director General, NED Academy

**Prof. Dr. Rizwan-ul-Haque Farooqui**

*B.E(Civil) NED; M.S. (Civil) National University of Singapore;  
Ph.D. (Civil) Florida International University, USA*

### Director, Office of Research, Innovation & Commercialization (ORIC)

**Dr. Syed Mehmood Hasan**

*M.Sc. Engg. Management (SCM) Uni. of Greenwich, UK;  
Ph.D. (Integration of SCM) Uni. of Greenwich, UK;*

### Principal Medical Officer (Medical Centre) (Acting)

**Dr. Mariam Alam**

*M.B.B.S (Baqai Medical University)*



## CHAPTER 2

# Academic Programmes and Departments

PROSPECTUS 2019  
Undergraduate



## 2.1 THE FACULTIES

The teaching departments under various Faculties are listed below:

### 2.1.1 Faculty of Civil and Petroleum Engineering

- i) Civil Engineering  
(Also Administering Bachelor of Engineering in Civil with Specialization in Construction Engineering Programme)
- ii) Urban & Infrastructure Engineering
- iii) Petroleum Engineering
- iv) Earthquake Engineering

### 2.1.2 Faculty of Mechanical & Manufacturing Engineering

- i) Mechanical Engineering
- ii) Textile Engineering  
(Also Administering Bachelor of Science in Textile Sciences Programme)
- iii) Industrial & Manufacturing Engineering
- iv) Automotive & Marine Engineering

### 2.1.3 Faculty of Electrical & Computer Engineering

- i) Electrical Engineering
- ii) Computer & Information Systems Engineering
- iii) Electronic Engineering  
(Also Administering Bachelor of Engineering in Telecommunications Programme)
- iv) Biomedical Engineering

### 2.1.4 Faculty of Chemical & Process Engineering

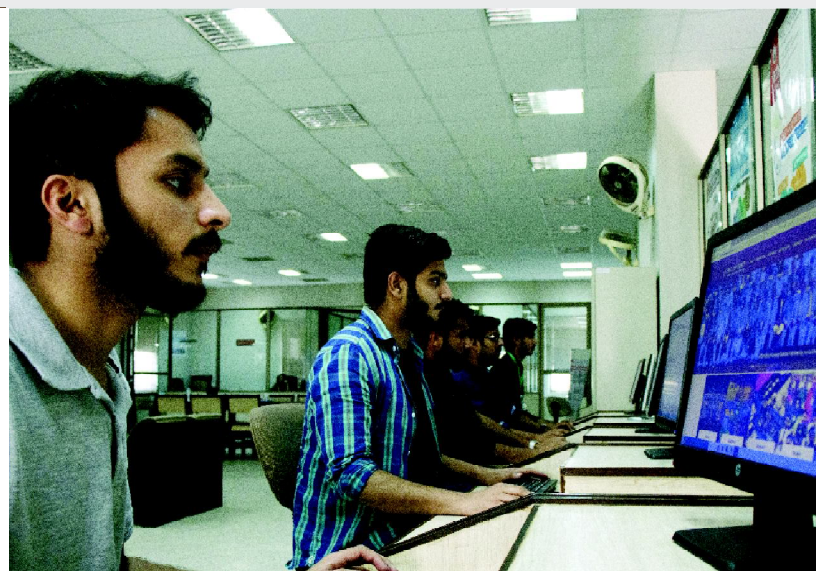
- i) Materials Engineering
- ii) Chemical Engineering
- iii) Metallurgical Engineering
- iv) Polymer & Petrochemical Engineering
- v) Food Engineering
- vi) Environmental Engineering

### 2.1.5 Faculty of Information Science & Humanities

- i) Software Engineering
- ii) Computer Science and Information Technology
- iii) Mathematics  
(Administering Bachelor of Science in Computational Finance Programme)
- iv) Physics  
(Administering Bachelor of Science in Applied Physics Programme)
- v) Chemistry  
(Administering Bachelor of Science in Industrial Chemistry Programme)
- vi) Humanities  
(Administering Bachelor of Science in English Linguistics)

### 2.1.6 Faculty of Architecture & Management Sciences (AMS)

- i) Architecture and Planning  
(Also Administering Bachelor of Science in Development Studies Programme)
- ii) Economics and Management Sciences  
(Administering Bachelor of Science in Economics & Finance and also Administering Bachelor of Science in Management Sciences Programmes)



## 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. Asad-ur-Rehman Khan

#### Co-Chairperson

Prof. Dr. Rizwan-UI-Haque Farooqui

#### 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-UI-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 State 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. Shamsun 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*

**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)*

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. Engr. Kainaat Nadeem  
*B.E. (Civil) NED; M. Engg. (Structural Earthquake) NED*
13. Ms. Saima Khan  
*B.E. (Civil) NED; MEM (Construction) NED*

**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

**Co-Chairperson**

Prof. Dr. Muhammad Raza Mehdi

**Professors**

1. Prof. Dr. Mir Shabbar Ali  
*B.E. (Civil) NED; M.S. (University of Alabama, USA);  
Ph.D. (Transportation); University of Birmingham, UK*
2. Prof. Dr. Adnan Qadir  
*B.E. (Civil) NED; M.Sc. (Civil) NED  
Ph.D. (Middle East Technical University, Ankara, Turkey)*
3. 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. Muhammad Adnan (*On leave*)  
*B.E. (Civil) NED; M. Engg. by Research NED;  
Ph.D. (Institute of Transport Studies, Leeds, UK)  
Post Doc (Singapore)*
3. 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. Uneb Gazdar (*On leave*)  
*B.E. (Civil) NED; M.Engg. (Civil) NED;  
Ph.D. (Transportation), KSA*
3. Dr. Sana Muqeem  
*B.E. (Civil) NED; M.Engg. (Civil) NED  
Ph.D. (Malaysia)*
4. Dr. Nida Azhar  
*B.E. (Civil) NED; M.Engg. (Civil) NED  
Ph.D. (Construction Management) USA*



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

### 2.2.3 Department of Petroleum Engineering

#### Chairperson (Acting)

Prof. Dr. Mir Shabbar Ali

#### 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*

#### Lecturers

1. Engr. Syed Imran Ali  
*B.E (Petroleum) NED*
2. Engr. Abdul Ahad Manzoor  
*B.E (Petroleum) NED*
3. Engr. M. Arqam Khan  
*B.E (Petroleum) NED*
4. 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)*

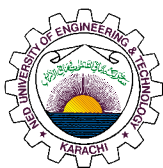
#### Associate Professor

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*

### 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*
4. Dr. Murtaza  
*B.E (Mech.) NED; M.Engg. (Mech.) NED;  
Ph.D. (Mech.) South Korea*

### 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. Mr. Umair Najeeb Mughal (*On study leave*)  
*B.E (Aerospace); M. Engg. (Mech.)*
4. Dr. Muhammad Ehtesham ul Haque  
*B.E (Mech); MS (Mech.) NED; Ph.D. (Mech.) Malaysia*
5. Dr. Muhammad Waseem  
*B.E (Mech.) NED; M. Engg.(Mfg.) NED;  
Ph.D. (Mech) New Zealand*
6. Dr. Muhammad Uzair  
*B.E (Mech.) NED; M. Engg.(Mech.) NED;  
Ph.D. (Mech) New Zealand*
7. Mr. Saeed Ahmed (*On study leave*)  
*B.E (Mech.) NED; M. Engg.(Mfg.) NED*
8. Mr. Masood Ahmed Khan  
*B.E (Mech.) NED; M. Sc. (Computer Science) NED;  
M. Engg (Mfg.) NED*

9. Mr. Naveed ur Rehman  
*B.E (Mech.) NED; M. Engg(Mech) NED*
10. Mr. Kashif Noor  
*B.E (Mech.)NED; M. Engg(Mech.) NED; MBA*
11. Ms. Erum Khan  
*B.E (Mech.) NED; M. Engg(Mech.) NED*
12. Dr. Tariq Jamil  
*B.E (Mech.) NED; M. Engg(Mech.) NED;  
Ph.D. (Mech.) USA*
13. Dr. Mahrukh  
*B.E (Mech.) NED; M. Engg(Mech.) NED;  
Ph.D. (Mech) UK*
14. Mr. Mumtaz Hussain Qureshi (*On study leave*)  
*B.E. (Mech) NED; M. Engg. (Mech) NED*
15. Syed Ahmad Raza (*On study leave*)  
*B.E (Mech.) NED; M. Engg (Mech.) NED*
16. Mr. Muhammad Muzammil (*On study leave*)  
*B.E. (Materials) NED; M.Engg. (Mech.) NED*
17. Mr. Saqib Sharif  
*B.E. (Mech.) NED; M.Engg. (Mech.) NED*
18. Mr. Ramaish  
*B.E. (Mech.) NED; M.Engg. (Mech.) NED*
19. Mr. Adeel Ahmed Khan  
*B.E. (Mech.) NED; M.Engg. (Mech.) NED*
20. Mr. Muhammad Sameer  
*B.E. (Mech) NED; M. Engg (Mech.) NED*
21. Dr. Ing. Usman Allaudin  
*B.E. (Mech) NED; M.Engg. (Mech) NED;  
Ph. D (Mech) Germany*
22. Syed Aun Ali Rizvi  
*B.E. (Mech) NED; M.Engg. (Mech) NUST*
23. Mr. Arshad Siddiqui  
*B.E. (Mech) NED; M.Engg. (Mech) Canada*

### Lecturers

1. Mr. Umair Bin Asim (*On study leave*)  
*B.E. (Aerospace) NUST; M. Engg (Mech.) NED*
2. Ms. Bushra Fatima  
*B.E. (Mech.) NED; M. Engg. (Energy Systems) Turkey*
3. Mr. Abdul Qadir  
*B.E. (Ind. & Mfg) NED; M. Engg (Mech.) NED*
4. Mr. Muhammad Uzair Yousuf (*On study leave*)  
*B.E. (Mech) NED; M. Engg (Mech.) NED*



5. Mr. Muhammad Azam  
*B.E. (Mech.) NED; M.Engg. (Mfg.) NED*
6. Mr. Seheroze Tahir Khan  
*B.E. (Mech.) NED; MEM (Ind.Mang) NED*
7. Ms. Hafiza Sumaiya Mohsin  
*B.E. (Mech.) NED; M. Engg. (Mech.) NED*
8. Mr. Muhammad Muzammil Ejaz  
*B.E. (Mech.) NED; M.S. (Thermal Power) NUST*
9. Mr. Abdul Ghaffar  
*B.E. (Mech.) NED; M. Engg. (Mech.) NED*
10. Mr. S.M. Hassan Liaquat  
*B.S. (Mech.) UET Texila; M.S. (Mech.) China*
11. Mr. Sohail Hasnain  
*B.E. (Mech.) NED; M. Engg. (Mech.) NED*
12. Ms. Ifrah Asif  
*B.E. (Ind. & Mfg.) NED; M. Engg. (Mfg.) NED*
13. Mr. Zain Shahid  
*B.E. (Mech.) NED; M. Engg. (Mech.) NED*
14. Mr. Shazleen Arshad  
*B.E. (Ind. & Mfg.) NED; M. Engg. (Mfg.) NED*
15. Mr. Muhammad Siddiqui  
*B.E. (Mech.) NED; MEM (Energy & Plant Mang.) NED*
16. Mr. Ahsan Ahmed  
*B.E. (Mech.) NED; MEM (Energy & Plant Mang.) NED*
17. Mr. Talha Bin Nadeem  
*B.E. (Mech.); MEM (Energy & Plant Mang.) NED*
18. Mr. Bilal Ahmed Soomro  
*B.E. (Mech.) MUET; M. Engg.(Mech.) NED*
19. Mr. Azhan Ahmed  
*B.E. (Mech.) NED; M. Engg (Mech.) NED*
20. 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); MBA;  
Ph.D. (Textile, University 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)*

### 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. Mrs. Farhana Naeem  
*B.E (Textile Engg); M.Engg. (Textile)*
6. Dr. Muhammad Amir Qureshi  
*B.E (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, Heriot Watt University, UK)*
7. Dr. Muhammad Ali  
*B.E. (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, The University of Leeds, UK)*
8. Mr. Muhammad Zubair *(On study leave)*  
*B.E. (Textile Engg); M.Engg. (Textile);  
Ph.D. (In Progress)*





9. Dr. M. Owais Raza Siddiqui  
*B.E. (Textile Engg); M.Engg. (Textile);  
Ph.D. (Textile, Heriot Watt University, UK)*
10. 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.)*

3. Mr. Muhammad Irfan  
*B.E. (Textile Engg); M.S. (Chemical Engineering &  
Technology, China)*

**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**

Prof. Dr. Syed Amir Iqbal

**Co-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. Mohammad Shoaib  
*B.E.(Mech); M.Engg. (Mfg. Engg)*
2. Mr. Ali Zulqarnain  
*B.E.(Mech); M.Engg. (Mfg. Engg); Ph.D (In Progress)*
3. Ms. Sadia Majeed  
*B.A. (Hons); M.A. (Eco);  
MAS (Industrial Eco.); M. Phil (KU)*
4. Dr. Muhammad Wasif  
*B.E. (MechEngg); M. Engg. (MfgEngg); Ph.D. (Canada)*
5. Dr. Syed Mehmood Hasan  
*B.E.(Ind. & Mfg. Engg); M.S (Engg. Mgt.) UK;  
Ph.D. United Kingdom*
6. Dr. Asim Zaheer  
*B.E.(Mech.); M.S (Engg. Mgt.); Ph.D. (UK)*

7. Ms. Shaheen Perween  
*B.E.(Mech.); M.Engg (Mfg Engg.); Ph.D. (In Progress)*
8. Dr. Aqeel Ahmed  
*B.E. (Mech. Engg); M. Engg (Mfg. Engg); Ph.D. (Canada)*
9. Dr. Shakeel Ahmed  
*B.E. (Ind & Mfg Engg); M. Engg. (Energy Systems);  
Ph.D. (UK)*
10. Ms. Rabia Siddiqui  
*B.E. (Ind & Mfg Engg); M. Engg. (Mfg Engg);*
11. Dr. Anis Fatima  
*B.E. (Ind. & Mfg. Engg); M.Engg (Mfg. Engg); Ph.D. (UK)*
12. Dr. Sheheryar Mohsin Qureshi  
*B.E.(Ind. & Mfg. Engg);M.Engg(Engg. Mgt.) Ph.D. (Korea)*
13. Ms. Rabiya Zubair  
*B.E. (Ind&Mfg Engg); M. Engg.(Mfg. Engg)*
14. Ms. Javeria  
*B.E. (Ind&Mfg Engg); M. Engg. (Mfg); Ph.D. (In Progress)*
15. 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  
*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

Ms. Yasmeen Khan  
B.E (Industrial & Manufacturing) NED  
M.Engg. (Automotive Manufacturing) NED

### 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 (Acting)

Dr. Muhammad Ali Memon

### Professors

Prof. Dr. Saad Ahmed Qazi  
B.E.(Electrical)NEDUET  
M.Sc.(DSP) UK; Ph.D.(UK)

### Associate Professors

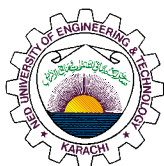
1. Dr. Muhammad Ali Memon  
B.E.(Electrical); M.Engg.NEDUET;  
MBA (MIS); Ph.D. (USA)
2. Dr. Muhammad Mohsin Aman  
B.E.(Electrical); M. Engg. (Electrical) NED  
Ph.D.(Malaysia)

### 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. KirshanLal Khatri  
B.E.(Electrical) MUET; MSEE (Telecom) SSUET;  
Ph.D. (USA); Professional Diploma Project  
Management, PIM Karachi.
11. Dr. Mirza Muhammad Ali Baig  
B.E.(Electrical); M. Engg. (Electrical) NED; Ph.D. (NED)





12. Ms. Samiya Zafar  
*B.E. (Electrical); M. Engg. (Electrical) NED; Ph.D. (In Progress)*
13. Dr. Beenish Sultana  
*B.E. (Electrical); M. Engg. (Electrical) NED;  
Ph.D. (Malaysia)*
14. Mr. Adnan  
*B.E. (Electrical) NED; M. Engg. (Electrical) NED;*
15. Mr. Hassan-ul-Haq  
*B.E. (Electrical); M. Engg. (Electrical) NED;*
16. Mr. Shariq Shaikh  
*B.E. (Electrical) NED; M. Engg. (Electrical) NED*
17. Mr. Fezan Rafique (*On Study Leave*)  
*B.E. (Electrical) NED; M. Engg. (Electrical) NED  
Ph.D. (In Progress)*
18. 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 Hammad Saleem  
*B.E. (Electrical) NED; M. Engg. (Electrical) NED*
14. Mr. Muhammad Arshad  
*B.E. (Electrical) MUET; M. Engg. (Electrical) NED*
15. Mr. Muhammad Uzair Khan  
*B.E. (Electrical) NED; M. Engg. (Electrical) NED*
16. Mr. Nabeel Fayyaz  
*B.E. (Electrical) NED; M. Engg. (Electrical) NED*
17. Mr. Hafiz Muhammad Furqan  
*B.E. (Electrical) NED; M. Engg. (Electrical) NED*

#### 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

Dr.-Ing. Shehzad Hasan

#### Co-Chairperson

Dr. Muhammad Ali Ismail

#### Associate Professors

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

**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. Saneeha Ahmed (*On study leave*)  
*B.E.(Comp. & Info. Sys.); M.Engg.(Comp Sys.); Ph.D. (Trust Establishment in Adhoc Networks) Canada*
5. Dr. Muhammad Asad Arfeen  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp. Sys.); Ph.D. (Teletraffic Engineering) New Zealand*
6. Ms. Hina Danish Khan  
*B.E.(Comp & Info. Sys.); M.Engg.(Comp Sys.)*
7. Dr. Maria Waqas  
*B.E.(Comp Sys.); M.Engg.(Comp Sys.); Ph.D. (Computational Biology)*
8. Ms. Urooj Ainuddin  
*B.E.(Comp Sys.); M.S.(Comp Sys.); Ph.D. (In Progress)*
9. Ms. Zareen Sadiq  
*B.E.(Comp & Info. Sys.); M.Engg.(Comp Sys.); Ph.D. (In Progress)*
10. Mr. Gul Munir Ujjan (*On study leave*)  
*B.E.(Comp Sys.); M.Engg.(Comp Sys.);*
11. Dr. Majida Kazmi  
*B.E. (Elect.); M. Engg. (Elect.); Ph.D. (VLSI Design for Digital Image Processing)*
12. Dr. Saad Qasim  
*B.E. (Comp & Info. Sys.); M. Engg. (Comp Sys.); Ph.D. (Artificial Intelligence / Neuromorphic Hardware)*

**13. 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. Ms. Maria Samad (*On study leave*)  
*B.E. (Comp. Sys.) Canada; M. Engg. (Comp Sys.)*
3. Mr. Kashif Asrar  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.)*
4. Ms. Fauzia Yasir  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.)*
5. Ms. Hameeza Ahmed  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.); Ph.D. (In Progress)*
6. Mr. Muhammad Ali Akhter  
*B.E. (Comp Info. Sys.); M. Engg. (Comp Sys.)*
7. Ms. Fakhra Aftab  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.)*
8. Ms. Mehwish Raza  
*B.E. (Comp. & Info. Sys.); M. Engg. (Comp Sys.)*
9. Mr. Umar Iftikhar  
*B.E. (Electrical); M.S. (Comp Engg.)*
10. Syeda Ramish Fatima  
*B.E. (Comp & Info. Sys.); M.S. (Comp Sys.)*
11. Ms. Ibhar Ishrat  
*B.E. (Comp & Info. Sys.); M.S. (Comp Sys.)*
12. Mr. Muhammad Nabeel Ibrahim Khan  
*B.E. (Electrical); M.S. (Information Security)*
13. Mr. Fahad Meraj  
*B.S. (Electronic); MBA UK*

**2.2.11 Department of Electronic Engineering***(Also administering Bachelor of Engineering in Telecommunications Programme)***Chairperson**

Prof. Dr. Syed Muhammad Usman Ali Shah

**Professors**

1. 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*
2. Prof. Dr. Attaullah Khawaja  
*B.E. (Electrical) MUET; M.Engg. (Electrical) NED; Ph.D. (Comm. & Info. Sys) (B.I.T) China*

**Associate Professors**

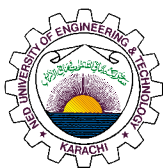
1. Dr. Ghous Bakhsh  
*B.E(Electronic) ; M.Engg(Electronic) Ph.D.(Electrical) Michigan Tech, University USA*

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

3. 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, New Zealand*
6. Mr. Shahzad Siddiqi  
*B.E (Electrical) NED; M.Engg (Telecommunications) NED*
7. Mr. Safi Ahmed Zakaia  
*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. Muhammad Khurram Shaikh (On study leave)  
*B.E. (Electrical) NED; MS (Comp. Science) Bradely Uni, USA  
Ph.D. (Computer Science) UK (In Progress)*
12. 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)*
13. Dr. Sunila Akbar  
*B.E. (Electrical) NED; M.Engg (Telecomm.) NED;  
Ph.D. (Telecommunications) NED*
14. Dr. Uzma Afsheen  
*B.E. (Electrical) NED; M.Engg (Telecommunications) NED  
Ph.D. (In Progress)*
15. Dr. Fahim Ull Haque  
*B.E. (Telecommunications) NED  
M.Engg (Telecommunications) NED  
Ph.D. (Electrical Engg.) Linkoping University, Sweden*
16. Dr. Yawar Rehman  
*B.E. (Electronic) MUET;  
M.Engg. (Telecommunication) Hamdard University;  
Ph.D (Electronics & Communication) Hanyang  
University South Korea*
17. 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*
18. Dr. Rizwan Aslam Butt  
*B.E. (Electronic) NED; MCIT NED; M.Engg (Telecom) NED;  
Ph.D (Communication Engg.) Malaysia*

## Lecturers

1. Ms. Hira Mariam  
*B.E. (Telecommunications) NED;  
M.Engg (Telecommunications) NED;  
Ph.D. (Telecommunications) NED (In Progress)*
2. Ms. Sundus Ali  
*B.S. (Telecommunications) FAST-NU;  
M.Engg (Telecommunications) Hamdard University;  
Ph.D. (Telecommunications) NED (In Progress)*
3. Mr. Muhammad Nasir  
*B.E. (Electronic) NED; M.Sc. (Computer Science) NED;  
M.Engg. (Electronic Engg.) In Progress*
4. Ms. Madiha Mazhar  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED;*
5. Ms. Amna Shabbir  
*B.E. (Telecomm) NED; M.Engg. (Telecomm) NED;  
Ph.D (Telecommunication) NED (In Progress)*
6. Ms. Saleha Bano  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED  
Ph.D (Electronic) NED (In Progress)*
7. Ms. Maheen Mazhar  
*B.E. (Electronic) NED; M.Engg (Electronic) NED;  
Ph.D (Electronic Engg.) NED (In Progress)*
8. Ms. Ayesha Akhtar  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED*
9. Ms. Saba Fakir  
*B.E. (Electronic) NED; M.Engg. (Telecommunications) NED*
10. Mr. Tariq Rehman (On study leave)  
*B.E. (Industrial Electronic) IIEE (NED);  
M.Engg. (Electronic) NED;  
Ph.D. (Electronic) Malaysia (In Progress)*
11. Ms. Hira Imtiaz  
*B.E. (Electronic) NED; M.Engg. (Electronic) NED*
12. 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*
13. Ms. Komal Masroor (On study leave)  
*B.E (Telecom) NED; M.Engg (Telecom) NED*
14. Mr. Shahid ur Rehman (On study leave)  
*B.E (Electrical) NED; M.Engg. (Telecom) NED*
15. Mr. Ayub Alam  
*B.E (Electrical) NED; M.Engg (Telecom) NED*
16. Syed Muneeb Ahmed  
*B.E (Telecom) SSUET; M.Engg NED*
17. Mr. Hani Hassan  
*B.E (Electronic) SSUET; M.Engg (Control & Automation)*
18. Ms. Arham Iqbal  
*B.E (Electronic) NED; M.Engg (Ind. Electronic)*



19. Ms. Sidra Rahman  
*B.E (Electronic) NED; M.Engg (Electronic) NED*
20. Ms. Aqsa Khan  
*B.E (Electronic) NED; M.Engg. (Electronic) NED*
21. 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)*

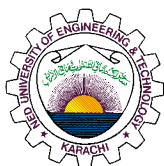
### Assistant Professors

1. Dr. Abu Zeeshan Bari (*On leave*)  
*B.E.(Mechanical) NEDUET;*  
*M.Engg. (Mechanical) NEDUET;*  
*Ph.D (Rehabilitation) University of Salford, UK*
2. 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*
3. 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;*
4. Dr. Furqan Ahmed  
*M.B.B.S. (SMC); R.M.P;*  
*Ph.D. (Biomaterials/Tissue Engineering); Australia*
5. Dr. Muhammad Abul Hasan  
*B.E.(Electronics) NEDUET;*  
*M. Engg. (Ind. Electronic) NEDUETt*  
*Ph.D. (Biomedical Engineering); University of Glasgow UK*

6. Dr. Bilal Ahmed Usmani  
*M.Sc. (Mathematics) (Pure) UoK;*  
*M.Phil (Mathematics) UoK;*  
*Ph.D (Mathematical Epidemiology); Uni of Glasgow, UK*
7. Dr. Nisar Ahmed Shar  
*B.S.(Bioinformatics) COMSATS;*  
*Ph.D. (Bioinformatics) University of Leeds, UK*
8. 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*
9. Mr. Riaz Uddin (*On study leave*)  
*B.S. (Biomedical) SSUET; M.S. (Biomedical) SSUET;*  
*MBA, IBA, Karachi*

### 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. Syed Amir Iqbal

#### Assistant Professors

1. Dr. Shahid Hussain  
*B.E. (Metallurgy & Materials) MUET;*  
*M.Engg. (Materials) NED;*  
*Ph.D. (Nano and Functional Materials) South Korea*
2. Dr. Muhammad Sohail  
*B.E. (Ind. & Mfg.) NED; M.Engg. (Materials) NED;*  
*Ph.D. (Welding Simulation) South Korea*
3. Dr. Fayaz Hussain  
*B.E. (Metallurgical) MUET; M.Engg. (Materials) NED*  
*PhD (Functional Materials and Devices),*  
*The University of Sheffield, UK.*
4. Dr. S. M. Sajid Ali Asghar  
*B.E. (Metallurgy and Materials) MUET;*  
*M.Engg. (Materials) NED; Ph.D. (UK)*
5. Engr. Humair Ahmed (*On study leave*)  
*B.E. (Materials) NED; M.Engg. (Materials Engg.) NED*  
*Ph.D. (In Progress) UK*
6. Engr. Muhammad Faizan (*On study leave*)  
*B.E (Materials) NED; M.Engg. (Materials) NED;*  
*Ph.D. (In Progress) South Korea*

7. Engr. Abdul Rauf Jamali  
*B.E (Metallurgy & Materials) MUET;*  
*M.Sc. (Materials Engg.) Germany*

#### Lecturers

1. Engr. Danish Majeed  
*B.E. (Metallurgy and Materials) MUET;*  
*M.Engg. (Materials) NED*
2. Engr. Faaz Ahmed Butt (*On study leave*)  
*B.E (Metallurgical) NED; M.Engg. (Materials) NED;*  
*Ph.D. (In Progress) Turkey*
3. Engr. M. Wasiq Ali Khan  
*B.E (Materials) NED; M.Engg. (Materials) NED;*
4. Engr. Mudassir Farooq  
*B.E (Metallurgy) NED; M.S. (Materials Engg) KSA;*
5. Ms. Ambreen Azmat  
*B.E (Materials) NED; M.Engg. (Materials) NED;*
6. Ms. Shafaq Asrar  
*B.E (Materials) NED; M.Engg. (Materials) NED;*
7. Engr. Umair Jamal  
*B.E (Metallurgy) NED; M.E.M. (Ind. & Mfg) NED;*

### 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*

#### Associate Professor

Dr. Zahoore Hussain Awan  
*B.E. (Mechanical), NED; M.Engg. (Chemical), NED*  
*Ph. D. (Chemical), Chonbuk Uni, South Korea*

#### 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) NED (In Progress)*

#### Lecturers

1. Syed Ali Ammar Taqvi (*On study leave*)  
*B.E (Chemical), NED; M.E (Chemical), NED*
2. Mr. Fahim Uddin (*On study leave*)  
*B.E (Chemical), NED; M.E (Chemical) NED*
3. Mr. Ahmed Ullah  
*B.E (Chemical), NED; M.E (Chemical) NED*

4. Ms. Hafsa Bano  
*B.E (Chemical), NED; M.E (Chemical) NED*
5. Ms. Zaha Naseem  
*B.E (Chemical), NED; M.E (Chemical) NED*
6. Mr. Abdul Sami  
*B.E (Chemical), DCET; M.E (Chemical) NED*
7. Mr. Muhammad Umair Shaikh  
*B.E (Chemical) MUET; M.E (Chemical) MUET*
8. Mr. Ibtihaj Khurram Faridi (*On study leave*)  
*B.E (Chemical) MUET; M.E (Chemical) Otto Von, Germany*
9. Syed Muhammad Tariq  
*B.E (Chemical) MUET; M.E (Chemical) NED*

10. Mr. Dileep Kumar  
*B.E (Chemical) MUET; M.E (Chemical) MUET*
11. Mr. Muhammad Shahid  
*B.E (Chemical) UoK; M.E (Chemical) NED*
12. 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 (Acting)

Prof. Dr. Syed Amir Iqbal

#### Associate Professors

1. Dr. Syed Humail ul Islam (*On Leave*)  
*B.E. (Mech); M.Engg (Mech) with  
Mfg. Engg. Specialization;  
Ph.D. (Materials Science Engg)*
3. Dr. Ali Dad Chandio  
*B.E. (Metallurgy & Materials) MUET;  
M.E. (Materials Engg.) NED  
Ph.D. (High Temperature Materials for Aero-engine  
Applications) UK*

#### Assistant Professors

1. Dr. Nafis-Ul- Haque  
*B.E. (Metallurgy & Materials) MUET;  
M.E. (Materials Engg.) NED;  
Ph.D. (Metallurgy & Materials Engg.) UK*
2. Engr. Iftikhar Ahmed Channa (*On study Leave*)  
*B.E (Metallurgy & Materials) MUET  
M.E (Materials Engg.) NED*
3. Engr. Aqeel Ahmed Shah  
*B.E. (Metallurgy & Materials) MUET;  
M.S. (Nano Materials) South Korea; Ph.D. (In progress)*
4. Dr.-Ing. Laraib Sarfraz Khanzada  
*B.E. (Metallurgy & Materials) MUET;  
M.E. (Materials Engg.) NED; Ph.D. (Materials Engg.  
Materials for Electronics & Energy Technologies)*
5. Engr. Muhammad Ali Siddiqui (*On study Leave*)  
*B.E. (Metallurgy & Materials) MUET;  
M.E. (Materials Engg.) NED*
6. Engr. Muhammad Samiuddin (*On study Leave*)  
*B.E. (Materials) NED; M.E. (Materials) NED*

7. Engr. Waseen Khan  
*B.E. (Metallurgical) NED; M.E. (Materials) NED;  
Ph.D. (In progress)*
8. Engr. Sajida Shaikh  
*B.E. (Materials) NED; M.E. (Materials) NED;  
Ph.D. (In progress)*
9. Dr. Muhammad Rizwan  
*B.E. (Materials) NED; M.E. (Materials) NED  
Ph.D. (Material Engg. Biomaterials) University of  
Malaysia, Malaysia*

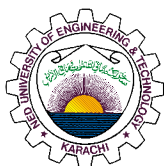
#### Lecturers

1. Engr. Zubia Anwer  
*B.E. (Metallurgical) NED; M.E. (Materials) NED;  
Ph.D. (In progress)*
2. Engr. Shafaq Asrar  
*B.E. (Materials) NED; M.E. (Materials) NED;  
Ph.D. (In progress)*
3. Engr. Ambreen Azmat  
*B.E. (Materials) NED; M.E. (Materials) NED;  
Ph.D. (In progress)*
4. Mr. Jahanzeb Bhatti  
*B.E. (Metallurgy & Materials) MUET;  
M.E. (Mechanical) University of Malaysia*
5. 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

Prof. Dr. Kausar Ali Syed  
*Ph.D. (Polymer Science)*  
*University of Louis Pasteur, Strasbourg, France*

### Associate Professors

Dr. Saud Hashmi  
*Ph. D. (Chemical), Chonbuk Uni, South Korea*

### Assistant Professors

1. Dr. Asim Mushtaq  
*B.E. (Chemical Engg.) NED; M.E. (Env. Engg.) NED;*  
*Ph.D. (Chemical Engg) Universiti Teknologi PETRONAS,*  
*Malaysia; Mem. PEC, PASSP*
2. Engr. Raza Muhammad Khan  
*B.E. (Polymer Engg) Hamdard University;*  
*M.Sc. (Advanced Materials Engg); Uni of Bradford UK*  
*CEng MIMechE*
3. Dr. Rafiq Ahmed  
*Ph.D. (Polymer Tech.) Eindhoven University*  
*of Technology, The Netherlands*
4. Dr. Junaid Akhlaas  
*Ph.D(Chemical) University of Padua, Italy*
5. 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. Nabihah 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. Farzana Yasmin

### Assistant Professors

1. Dr. Muhammad Badaruddin  
*M.Sc. (Food Science and Technology) UoK*  
*Ph.D. (Biosciences) University of Exeter, UK*
2. Mr. 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*

### Lecturers

3. Ms. Alia  
*B.E. (Chemical) NED; M. Engg(Chemical) NED*
4. Mr. Muhammad Hassam Siddiqui  
*B.E. (Chemical) DUET; M. Engg (Chemical) NED*
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*
5. Syeda Ashma Batool Zaidi  
*B.E. (Food) NED; MEM (NED)*

**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**

Prof. Dr. Asif Ahmed Shaikh

**Co-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.*

**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*

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*

**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. Engr. Kashif Mehboob Khan  
*B.S (Comp Engg) SSUET; MCIT (NED); Ph.D. (In Progress)*
2. Engr. Asma Khan  
*B.E (Comp. Sys.) MUET; M.E. (Info Tech) MUET*
3. Engr. Muhammad Faraz Hyder  
*B.E (Comp. Sys.) NED; M.S. (Telecom) NED;*  
*Ph.D. (In Progress) NED*



4. Engr. Mustafa Latif  
*B.E (Comp. & Info. Sys.) NED; M.E. (Comp. Sys.) NED;  
Ph.D. (In Progress) NED*
5. Engr. Shumaila Ashfaq  
*B.E. (Comp & Info. Sys) NED; M. Engg (Comp. Sys.) NED*
6. Engr. Simra Najm  
*B.E. (Comp & Info. Sys) NED; M. Engg (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. Maria Andaleeb Siddiqui  
*B.E. (Telecom) NED; M.E. (Comp. Sys) NED;  
Ph.D. (In Progress)*

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

**IT Managers (Senior Scale)**

Engr. Syed Amjad Ali  
*B.E. (Mech) NED; MCIT (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**

Ms. Saba Izhar Haque  
*BSc (Hons) UMIST, UK; M Phil (Computation); UMIST, UK*

**Lecturers**

1. Mr. Wasimullah  
*BCIT (NED); MCIT (NED); Ph.D. (In Progress)*
2. Mr. Muhammad Umer Farooq  
*BCIT (NED); MCIT (NED); Ph.D. (In Progress)*
3. 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)**

1. Mr. Jamil Asghar (On leave)  
*BCIT (NED); MCIT (NED)*
2. Ms. Nazish Irfan  
*MS (IT) PIMSAT*
3. Mr. Mehboob Ahmed  
*B.S. (CS) (MAJU); MS (Comp. Networks) KTH (Sweden)*



## 2.2.21 Department of Mathematics

(Administering Bachelor of Science in Computational Finance Programme)

23

### 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. UniLahore
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

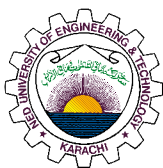
12. Mr. Zakir Hussain Khan  
B.Sc. (Hons) UoK; M.Sc. (Statistics) UoK  
MS. (Applied Mathematics) NED

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

### Lecturers

1. Mrs. Saima Gul (On study leave)  
M.Sc. (Mathematics) UoK
2. Mr. Muhammad Yousuf Tufail (On study leave)  
B.Sc. (Hons) (Mathematics) UoK; M.Sc. (Mathematics) UoK
3. Mr. Yasir Hussain Khan  
B.S. (Mathematics) FUUAST; MS (Applied Mathematics) NED
4. Mr. Muhammad Samad Khan  
B.E. (Electrical) NED; MS (Applied Mathematics) NED
5. Mr. Sami Ullah Qureshi  
B.S. (Economics) UoK; M.Phil (Applied Economics) UoK
6. Ms. Shinza Jabeen  
M.Sc. (Applied Mathematics) UoK;  
MS (Applied Mathematics) NED
7. Ms. Onaiza Ali  
B.S. (Applied Mathematics) UoK;  
MS (Applied Mathematics) NED
8. Ms. Ammara Ashraf  
M.Sc. (Mathematics) UoK;  
MS (Applied Mathematics) NED
9. Ms. Shabnam Mushtaq  
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

**2.2.22 Department of Physics***(Administering Bachelor of Science in Applied Physics Programme)***Chairperson (Acting)**

Prof. Dr. Mirza Mahmood Baig

**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 Physics / Radiation Physics)*
4. Ms. Saba Javaid  
*B.Sc. (Hons) UoK; M.Sc. (Phy) UoK; MS UoK;  
Ph.D. (In Progress)*
5. Ms. Roohi Zafar  
*B.Sc. (Hons) UoK; M.Sc. (Phy) UoK; MS UoK;  
Ph.D. (In Progress)*

6. Mr. Junaid Karim Khan  
*B.Sc UoK; M.Sc. (Applied Physics) UoK;  
M.Phil (Renewable Energy) UoK; Ph.D. (In Progress)*

7. Ms. Hira Ashfaq Lodhi  
*M.Sc. (Applied Physics) UoK;  
MS (Applied Mathematics) NED; Ph.D. (In Progress)*

**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;*

**2.2.23 Department of Chemistry***(Administering Bachelor of Science in Industrial Chemistry Programme)***Chairperson (Acting)**

Prof. Dr. Mirza Mehmood Baig

**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

### 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) Wifaqul Madaris;  
L.L.B. KU; Fazail-e-Arabi KU; Ph.D. (Islamic Studies) I.U.B;  
Islamic Jurisprudence Course, I.I.U. Islamabad
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

### 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)

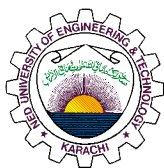
9. Ms. Hina Manzoor  
M.A. English (Linguistics), KU; M.S (Applied Linguistics), KU;  
Ph.D. (Applied Linguistics), SU (In Progress)
10. Mr. Muhammad Asim Khan  
M.A. Eng. (Literature & Linguistics) KU;  
MS (Applied Linguistics), KU;  
Ph.D. (Applied Linguistics), NED (In Progress)
11. Dr. Rahat Rizvi  
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







## 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

1. Ms. Asiya Sadiq (*On study leave*)  
*B.Arch; M.Arch (KU-Leuven, Belgium); MPCATP*
2. Ms. Fariha Amjad Ubaid  
*B.Arch; MCPUD (METU, Turkey); MPCATP*

### Assistant Professors

1. Ms. Fahmida Bano Sheikh  
*B.Arch; MURP; Ph.D. Scholar (NED); MPCATP*
2. Mr. Ravindar Kumar Ravi  
*B.Arch; MUD.; Ph.D. Scholar (NED); 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. Mr. Munir Ahmed Memon  
*B.Arch; MPCATP*
2. Ms. Afsheen Sadaf (*On Study Leave*)  
*B.Arch; MURP; MPCATP*
3. Ms. Rabiya Asim  
*B.Arch; MURP; MPCATP*
4. Ms. Sarah Ather Khan  
*B.Arch; MURP; MPCATP*
5. Ms. Rahat Arsalan  
*B.Arch; MURP; MPCATP*
6. Ms. Safia Asif  
*B.Arch; MURP; MPCATP*
7. Syed Najia Zaidi (*On Study Leave*)  
*B.Arch; MURP; MPCATP*
8. Syed Fariha Tahseen  
*B.Arch; M. Arch (Lincoln UK)*
9. Ms. Tania Ali Soomro  
*B.Arch; MS in Conservation (KU - Leuven, Belgium) MPCATP*
10. Ms. Madiha Salam  
*B.Arch; M. Arch; MPCATP*
11. Ms. Madiha Arif (*Fine Arts*)  
*BFA (NCA Lahore)*
12. Mr. Mansoor Raza (*Development Studies*)  
*B.E. (Electrical) NED; M.Sc. (Env. Science) UoK*
13. Ms. Ambreen Alwani (*Development Studies*)  
*Doctorate of Pharmacy (UoK);  
MBA Health and Hospital Management (IoBM)*

## 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)

27

### Chairperson

Dr. Raza Ali Khan

### Lecturer

- 1 Dr. Shahid Iqbal  
PGD (Statistics) UoK; MA (Economics) UoK;  
MA (International Relations) UoK;  
M.S. / M.Phil (Applied Economics) AERC-UoK;  
Ph.D. (Economics) UoK
- 2 Ms. Mahim Fatima  
BS (Economics) UoK; MS (Economics & Finance) NED
- 3 Ms. Marium Zehra  
BBA (Finance) IoBM; MBA (Finance) IoBM
- 4 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)

### Associate Professor

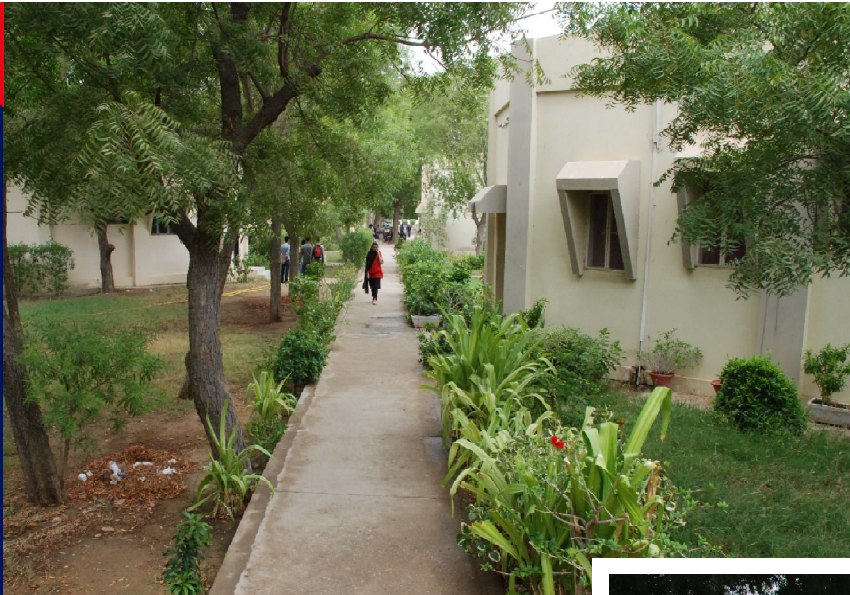
Dr. Raza Ali Khan  
DAE (Civil) SEZIT; PGD (Public Administration) UoK;  
M.A. (International Relations) UoK;  
M.A. (Economics) UoK; M.S./M.Phil (Economics) SZABIST;  
Ph.D. (Construction Economics Management)  
Universiti Teknologi PETRONAS, Malaysia)

### Assistant Professor

1. Ms. Rabia Shakir  
M.A. (Economics & Finance) UoK; M.Phil (Economics) UoK;  
Ph.D. (Economics) UoK (In Progress)
2. Mirza Faizan Ahmed  
MAS (Applied Economics) AERC-UoK;  
MBA (Finance) KUBS-UoK;  
Ph.D. (Behavioural Economics & Finance) AERC-UoK (In Progress)







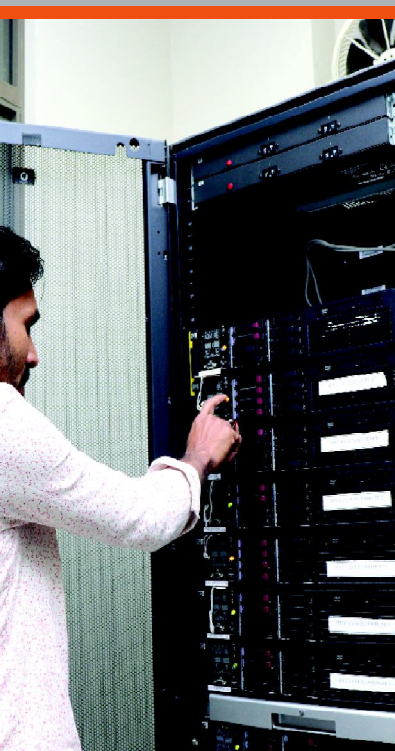




## CHAPTER 3

# Course of Studies

PROSPECTUS **2019**  
Undergraduate





Students admitted in this University are required to study all approved courses of the respective discipline. They are also needed to complete the following requirement during their study in the University:

- Take part in Community Outreach programme by getting engaged in a Social Internship and doing 20 hours' work in the society.

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      |
| 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      | MT-221          | Linear Algebra & Ordinary Differential Equations | 3      | 0 3      |
| HS-106        | Pakistan Studies OR               | 1      | 0 1      | HS-111          | Functional English                               | 2      | 0 2      |
| HS-107        | 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-218        | Business Communication              | 2      | 0 2      | MT-331          | Probability & Statistics        | 3      | 0 3      |
| HS-205        | Islamic Studies OR                  |        |          | HS-219          | Professional Ethics             | 2      | 0 2      |
| HS-209        | Ethical Behaviour (for Non-Muslims) | 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          | Structure Analysis-II                        | 3      | 0 3      |
| CE-319        | Fluid Mechanics-II             | 3      | 1 4      | CE-322          | Mechanics of Solids-II                       | 3      | 0 3      |
| MT-443        | Numerical Analysis             | 3      | 0 3      | CE-424          | Essential in Construction Project Management | 3      | 0 3      |
| AR-309        | Architecture and Town Planning | 3      | 0 3      |                 |  |        |          |



## FINAL YEAR

31

| 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-420        | Reinforced Concrete Design-II                         | 3            | 0  | 3     | CE-###          | Civil Engineering Elective (3+0 OR 2+1 OR 1+2)                    | 3/2/1        | 0/1/2 | 3     |
| CE-432        | Transportation Engineering-II                         | 2            | 0  | 2     | CE-###          | Management Elective   | 3            | 0     | 3     |
| CE-418        | Hydraulics and Water Resources Engineering-I          | 3            | 1  | 4     | CE-###          | Social Science Elective   | 2            | 0     | 2     |
| 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     |
|               | <b>Civil Engineering Elective</b>                     |              |    |       |                 | <b>Management Sciences Elective</b>                               |              |       |       |
| CE-419        | Applied Hydraulics (3+0)                              |              |    |       | CE-425          | Modern Aspects of Construction Project Management (3+0)           |              |       |       |
| CE-422        | Structural Design and Drawing (3+0)                   |              |    |       | CE-430          | Construction Contract Management (3+0)                            |              |       |       |
| CE-423        | Masonry Structures (3+0)                              |              |    |       | CE-434          | Procurement Management (3+0)                                      |              |       |       |
| CE-426        | Building Information Modelling (1+2)                  |              |    |       | CN-423          | Management and Marketing of Construction Services (3+0)           |              |       |       |
| CE-429        | Geo Synthetics and Their Applications (3+0)           |              |    |       | CN-432          | Leadership and Human Skills in Management (3+0)                   |              |       |       |
| CE-431        | Geoinformatics Applications (2+1)                     |              |    |       |                 | <b>Social Sciences Elective</b>                                   |              |       |       |
| CE-433        | Coastal and Harbour Engineering (3+0)                 |              |    |       | CE-427          | Introduction to Entrepreneurship and Opportunity Assessment (2+0) |              |       |       |
| CE-438        | Hydraulics and Water Resources Engineering – II (3+0) |              |    |       |                 |   |              |       |       |
| CN-424        | Environmental Issues in Construction (3+0)            |              |    |       |                 |   |              |       |       |
| CN-430        | Disaster and Reconstruction Management (3+0)          |              |    |       |                 |   |              |       |       |

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

#### 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     | 2            | 1  | 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-Infomatics            | 1            | 1  | 2     |

#### FINAL YEAR

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

#### Inter-Disciplinary Elective

|        |   |   |   |   |         |                                      |   |   |   |
|--------|---|---|---|---|---------|--------------------------------------|---|---|---|
| UE-421 | Modern Aspects of Construction Project Management | 2 | 1 | 3 | UE-426  | Geosynthetics and their applications | 3 | 0 | 3 |
| UE-422 | Traffic Impact Assessment                         | 2 | 1 | 3 | UE-427  | Procurement Management               | 3 | 0 | 3 |
| UE-423 | Highway and Airfield Pavement Design              | 2 | 1 | 3 | CE-419  | Applied Hydraulics                   | 3 | 0 | 3 |
| UE-424 | Building Information Modeling                     | 2 | 1 | 3 | CE-423/ | Masonry Structure                    | 3 | 0 | 3 |
| UE-425 | Applications in City and Regional Planning        | 2 | 1 | 3 | CE-410  |                                      |   |   |   |

\* 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 Th | Hours Pr Total | Course Code     | Course Title            | Credit Th | Hours 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     | 2         | 1 3            |
| 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 Th | Hours Pr Total | Course Code     | Course Title                       | Credit Th | Hours 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                               | 3         | 1 4            | MT-331          | Probability & Statistics           | 3         | 0 3            |
| HS-205        | Islamic Studies OR                               | 2         | 0 2            |                 |                                    |           |                |
| HS-209        | Ethical Behavior (for Non-Muslims)               |           |                |                 |                                    |           |                |
| HSK-II        | Chinese Language                                 |           | NC             |                 |                                    |           |                |

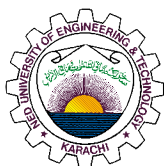
## THIRD YEAR

| Fall Semester |  |           |                | Spring Semester |                                |           |                |
|---------------|--|-----------|----------------|-----------------|--------------------------------|-----------|----------------|
| Course Code   | Course Title                                 | Credit Th | Hours Pr Total | Course Code     | Course Title                   | Credit Th | Hours 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-442          | Numerical Methods              | 3         | 0 3            |
| HS-304        | Business Communication & Ethics              | 3         | 0 3            |                 |                                |           |                |

## FINAL YEAR

| Fall Semester |  |           |                | Spring Semester |  |           |                |
|---------------|--|-----------|----------------|-----------------|--|-----------|----------------|
| Course Code   | Course Title   | Credit Th | Hours Pr Total | Course Code     | Course Title   | Credit Th | Hours 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 Enhanced Oil Recovery | 3         | 1 4            |
| PE-408        | Well Testing   | 3         | 1 4            | PE-406          | Petroleum Refinery Engineering                           | 2         | 1 3            |
| PE-412        | Introduction to Unconventional Oil, Gas & Energy Resources | 2         | 0 2            | PE-407          | Petroleum Property, Environment & Safety Management      | 2         | 0 2            |
| PE-411        | Project Planning & Management                              | 2         | 0 2            | PE-410          | Petroleum Engineering Project                            | 0         | 6 6            |
| PE-410        | Petroleum Engineering Project*                             | -         | - -            |                 |  |           |                |

\* 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 Th | Hours Pr | Total | Course Code     | Course Title                                    | Credit Th | Hours 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 Algeba & 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-219          | Fluid Mechaics - I       | 3            | 1  | 4     |
| CE-220        | Geology for Engineers                      | 2            | 1  | 3     | CE-221          | Structural Analysis - I  | 3            | 0  | 3     |
| HS-218        | Business Communication                     | 2            | 1  | 3     | HS-219          | Professional Ethics      | 2            | 0  | 2     |
| HS-205/       | Islamic Studies OR                         | 2            | 0  | 2     | MT-331          | Probability & Statistics | 3            | 0  | 3     |
| HS-209        | Ethical Behaviour <i>(for Non-Muslims)</i> |              |    |       | CN-223          | Fundamentals of Applied  | 3            | 0  | 3     |
| HSK-II        | Chinese Language                           |              |    | NC    |                 | Economics for Engineers  |              |    |       |

#### 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     | CN-331          | Construction Jobsite Engineering Management                 | 3            | 0  | 3     |
| CN-323        | Construction Contracts              | 3            | 0  | 3     | CN-333          | Consturction 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     |
| AR-309        | Architecture and Town Planning      | 3            | 0  | 3     |                 |   |              |    |       |

#### FINAL YEAR

| Fall Semester |   |           |          |       | Spring Semester |  |           |          |       |
|---------------|---|-----------|----------|-------|-----------------|--|-----------|----------|-------|
| Course Code   | Course Title  | Credit Th | Hours Pr | Total | Course Code     | Course Title   | Credit Th | Hours Pr | Total |
| CN-428        | Sustainable Construction                                      | 3         | 0        | 3     | CN-###          | Civil Engineering Elective                             | 3/2/1     | 0/1/2    | 3     |
| CN-435        | Systems in Building Construction                              | 3         | 0        | 3     | CN-429          | Building Information Modeling                          | 1         | 2        | 3     |
| CN-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                                   | 3         | 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

|        |                                       |       |        |   |       |
|--------|---------------------------------------|-------|--------|---|-------|
| CE-419 | Applied Hydraulics                    | (3+0) | CE-433 | Coastal and Harbour Engineering               | (3+0) |
| CE-422 | Structural Design and Drawing         | (3+0) | CE-438 | Hydraulics and Water Resources Engineering-II | (3+0) |
| CE-423 | Masonry Structures                    | (3+0) | CN-424 | Environmental Issues in Constructions         | (3+0) |
| CE-429 | Geo SYntehtics and Their Applications | (3+0) | CN-430 | Disaster and Reconstruction Management        | (3+0) |
| CE-431 | Geoinformatics Applications           | (2+1) |        |   |       |

\* 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 Th | Hours Pr | Total | Course Code     | Course Title                      | Credit Th | Hours Pr | Total |
| 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     |
| CE-103        | Engineering Surveying-I           | 3         | 1        | 4     | EE-124          | Basic Electricity and Electronics | 2         | 1        | 3     |
| HS-105        | Pakistan Studies OR               | 2         | 0        | 2     | ME-104          | Workshop Practice                 | 0         | 2        | 2     |
| HS-127        | Pakistan Studies (for Foreigners) | 2         | 1        | 3     | ME-106          | Statics                           | 2         | 1        | 3     |
| ME-111        | Engineering Drawing               |           |          |       | ME-112          | Thermodynamics                    | 3         | 0        | 3     |
|               |                                   |           |          |       | 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 |
| HS-205        | Islamic Studies OR                               | 2         | 0        | 2     | MT-330          | Applied Probability & Statistics      | 2         | 1        | 3     |
| HS-209        | Ethical Behaviour (for Non-Muslims)              |           |          |       | ME-202          | Solid Mechanics - I                   | 3         | 1        | 4     |
| MT-223        | Ordinary Differential Equations & Fourier Series | 3         | 0        | 3     | ME-209          | Materials & Metallurgy                | 3         | 1        | 4     |
| ME-204        | Fluid Mechanics - I                              | 3         | 1        | 4     | ME-214          | Computer Programming & Applications   | 2         | 1        | 3     |
| ME-213        | Dynamics   | 2         | 1        | 3     | ME-217          | Elements of Machine Dynamics & Design | 3         | 0        | 3     |
| ME-215        | Internal Combustion Engines                      | 2         | 1        | 3     |                 |                                       |           |          |       |
| ME-216        | Production Engineering - I                       | 3         | 0        | 3     |                 |                                       |           |          |       |
| HSK-II        | Chinese Language                                 |           |          | NC    |                 |                                       |           |          |       |

## THIRD YEAR

| Fall Semester |                                 |           |          |       | Spring Semester |                                    |           |          |       |
|---------------|---------------------------------|-----------|----------|-------|-----------------|------------------------------------|-----------|----------|-------|
| Course Code   | Course Title                    | Credit Th | Hours Pr | Total | Course Code     | Course Title                       | Credit Th | Hours Pr | Total |
| HS-304        | Business Communication & Ethics | 3         | 0        | 3     | MT-332          | Advanced Calculus & Linear Algebra | 3         | 0        | 3     |
| ME-307        | Production Engineering – II     | 3         | 1        | 4     | EE-373          | Machine Control System             | 3         | 1        | 4     |
| ME-312        | Powerplant Engineering          | 3         | 1        | 4     | ME-305          | Machine Design                     | 3         | 1        | 4     |
| ME-313        | Solid Mechanics - II            | 3         | 0        | 3     | ME-315          | Heat & Mass Transfer               | 3         | 1        | 4     |
| ME-314        | Fluid Mechanics - II            | 3         | 0        | 3     | ME-403          | Refrigeration & Air Conditioning   | 3         | 1        | 4     |

## FINAL YEAR

| Fall Semester |                                 |           |          |       | Spring Semester |  |           |          |       |
|---------------|---------------------------------|-----------|----------|-------|-----------------|--|-----------|----------|-------|
| Course Code   | Course Title                    | Credit Th | Hours Pr | Total | Course Code     | Course Title                             | Credit Th | Hours Pr | Total |
| MF-303        | Applied Economics for Engineers | 3         | 0        | 3     | HS-403          | Entrepreneurship                         | 3         | 0        | 3     |
| ME-306        | Mechanical Vibration            | 3         | 1        | 4     | MT-441          | Advanced Mathematical Techniques         | 3         | 0        | 3     |
| ME-409        | Mechanical Engineering Project* | -         | -        | -     | ME-409          | Mechanical Engineering Project           | 0         | 6        | 6     |
| ME-419        | Stress Analysis                 | 3         | 0        | 3     | ME-417          | Compressible Flow and Propulsion Systems | 3         | 0        | 3     |
| ME-420        | Operations Management           | 2         | 0        | 2     |                 |  |           |          |       |
| ME-###        | Electives 1                     | 2/3       | 1/0      | 3     | ME-###          | Electives 2                              | 2/3       | 1/0      | 3     |

## Elective Courses

|        |   |        |                                  |
|--------|---|--------|----------------------------------|
| ME-421 | Gas Turbines  | ME-425 | Finite Element Analysis          |
| ME-422 | Nuclear Power   | ME-426 | Plant Maintenance                |
| ME-423 | Computer Aided Design /<br>Computer Aided Manufacturing | ME-428 | Health, Safety and Environment   |
| ME-424 | Clean Energy Technology                                 | ME-429 | Water Treatment and Desalination |

\* 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 Th | Hours Pr | Total | Course Code     | Course Title                      | Credit Th | Hours 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-114        | Engineering Drawing                 | 2         | 1        | 3     | ME-104          | Workshop Practice                 | 0         | 2        | 2     |
| MT-114        | Calculus                            | 3         | 0        | 3     | EE-122          | Basic Electricity and Electronics | 3         | 0        | 3     |
| HS-105        | Pakistan Studies OR                 | 2         | 0        | 2     | ME-101          | Engineering Mechanics             | 3         | 1        | 4     |
| HS-127        | Pakistan Studies (for Foreigners)   |           |          |       | HSK-I           | Chinese Language                  |           |          | NC    |
| HS-104        | Functional English                  | 3         | 0        | 3     |                 |                                   |           |          |       |

#### 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 Materials                          | 3            | 1  | 4     | TE-211          | Textile Yarn Manufacturing | 3            | 1  | 4     |
| TE-224        | Polymer & Fiber Science                         | 2            | 0  | 2     | TE-205          | Pre-treatment of Textiles  | 3            | 1  | 4     |
| TE-203        | Computer Programing & Application               | 2            | 1  | 3     | TE-207          | Machine Design             | 3            | 0  | 3     |
| TE-206        | Fluid Mechanics for Textiles                    | 2            | 1  | 3     | TE-208          | Material Science           | 2            | 1  | 3     |
| MT-225        | Linear Algebra & Ordinary Differential Equation | 3            | 0  | 3     | HS-205          | Islamic Studies /          | 2            | 0  | 2     |
| HSK-II        | Chinese Language                                |              |    | NC    | HS-209          | Ethical Behavior           |              |    |       |

#### 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-313          | Textile Product Evaluation-I         | 3            | 1  | 4     |
|               |  |              |    |       | TE-319          | Heat & Mass Transfer                 | 2            | 1  | 3     |
| TE-307        | Utilities for Textile Industry         | 3            | 1  | 4     | TE-318          | Textile & Enviroment                 | 2            | 0  | 2     |
| MF-303        | Applied Economics for Engineers        | 3            | 0  | 3     | TE-305          | Quality Control in Textiles          | 2            | 0  | 2     |
| TE-326        | Textile Dyeing                         | 3            | 1  | 4     | ME-311          | Manufacturing Processes              | 3            | 1  | 4     |
| HS-304        | Business Communication & Ethics        | 3            | 0  | 3     | 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     | TE-462          | Advanced Fabric Manufacturing Mechanism | 3            | 1  | 4     |
| TE-453        | Garment Manufacturing               | 3            | 0  | 3     |                 |   |              |    |       |
| TE-424        | Textile Printing                    | 3            | 1  | 4     | HS-403          | Entrepreneurship                        | 3            | 0  | 3     |
| TE-###        | Electives                           | 3            | 1  | 4     | TE-451          | Automation & Control in Textiles        | 3            | 0  | 3     |
| TE-408        | Textile Engineering Design Project* | 0            | 3  | 3     | TE-###          | Electives                               | 3            | 0  | 3     |
| TE-413        | Textile Product Evaluation-II       | 3            | 1  | 4     | TE-408          | Textile Engineering Design Project      | 0            | 3  | 3     |

##### Elective Courses

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

##### Elective Courses

|        |                                    |
|--------|------------------------------------|
| 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

37

## FIRST YEAR

| Fall Semester |                                   |              |    |       | Spring Semester |                                      |              |    |       |
|---------------|-----------------------------------|--------------|----|-------|-----------------|--------------------------------------|--------------|----|-------|
| Course Code   | Course Title                      | Credit Hours |    |       | Course Code     | Course Title                         | Credit Hours |    |       |
|               |                                   | Th           | Pr | Total |                 |                                      | Th           | Pr | Total |
| ME-101        | Engineering Mechanics             | 3            | 1  | 4     | IM-101          | Computer Applications in Engineering | 2            | 1  | 3     |
| EE-122        | Basic Electricity and Electronics | 3            | 0  | 3     | ME-111          | Engineering Drawing                  | 2            | 1  | 3     |
| MT-111        | Calculus                          | 3            | 0  | 3     | PH-122          | Applied Physics                      | 3            | 1  | 4     |
| ME-104        | WorkShop Practice                 | 0            | 2  | 2     | HS-111          | Functional English                   | 2            | 0  | 2     |
| 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 Th | Hours Pr | Total | Course Code     | Course Title                                     | Credit Th | Hours Pr | Total |
| IM-203        | Manufacturing Processes                  | 3         | 1        | 4     | IM-211          | Machine Design                                   | 3         | 1        | 4     |
| IM-209        | Mechanics of Materials                   | 3         | 1        | 4     | IM-212          | Computer Aided Engineering Design                | 2         | 1        | 3     |
| IM-208        | Materials Engineering                    | 3         | 1        | 4     | MT-225          | Linear Algebra & Ordinary Differential Equations | 3         | 0        | 3     |
| MT-252        | Introduction to Probability & Statistics | 3         | 1        | 4     | MF-303          | Applied Economics for Engineers                  | 3         | 0        | 3     |
| HS-205        | Islamic Studies OR                       | 2         | 0        | 2     | IM-213          | Metrology & Quality Control                      | 3         | 1        | 4     |
| HS-209        | Ethical Behaviour (for Non-Muslims)      |           |          |       |                 |  |           |          |       |
| HSK-II        | Chinese Language                         |           |          | NC    |                 |  |           |          |       |

## THIRD YEAR

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

## FINAL YEAR

| Fall Semester |                                       |           |          |       | Spring Semester |                                   |           |          |       |
|---------------|---------------------------------------|-----------|----------|-------|-----------------|-----------------------------------|-----------|----------|-------|
| Course Code   | Course Title                          | Credit Th | Hours Pr | Total | Course Code     | Course Title                      | Credit Th | Hours Pr | Total |
| IM-405        | Finite Element Analysis               | 3         | 1        | 4     | IM-417          | Health, Safety & Environment      | 2         | 1        | 3     |
| IM-402        | Computer Aided Manufacturing          | 3         | 1        | 4     | IM-413          | Plant Engineering                 | 3         | 1        | 4     |
| MG-450        | Principles of Supply Chain Management | 3         | 0        | 3     | HS-403          | Entrepreneurship                  | 3         | 0        | 3     |
|               |                                       |           |          |       | MT-441          | Advanced Mathematical Techniques  | 3         | 0        | 3     |
| IM-##         | Electives                             | 3         | 1        | 4     | IM-409          | Manufacturing Engineering Project | 0         | 6        | 6     |
| IM-409        | Manufacturing Engineering Project*    | -         | -        | -     |                 |                                   |           |          |       |

## Elective Courses

|        |                               |
|--------|-------------------------------|
| 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    | Course Code     | Course Title                              | Credit | Hours    |
|               |                                    | Th     | Pr Total |                 |   | Th     | Pr Total |
| PH-122        | Applied Physics                    | 3      | 1 4      | ME-106          | Statics                                   | 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 Foreigners)  |        |          | HSK-I           | Chinese Language                          |        | NC       |
| ME-104        | Workshop Practice                  | 0      | 2 2      |                 |   |        |          |

**SECOND YEAR**

| Fall Semester |  |        |          | Spring Semester |                                     |        |          |
|---------------|--|--------|----------|-----------------|-------------------------------------|--------|----------|
| Course Code   | Course Title                                     | Credit | Hours    | Course Code     | Course Title                        | Credit | Hours    |
|               |  | Th     | Pr Total |                 |                                     | 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    | Course Code     | Course Title                    | Credit | Hours    |
|               |                                    | Th     | Pr Total |                 |                                 | 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-442          | Numerical Methods               | 3      | 0 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    | Course Code     | Course Title                                  | Credit | Hours    |
|               |   | Th     | Pr Total |                 |   | Th     | Pr Total |
| AU-415        | Vehicle Design                                      | 2      | 0 2      | AU-431          | Vehicle Thermal Management                    | 3      | 0 3      |
| AU-416        | Mechatronics  | 3      | 1 4      | AU-422          | Automotive Transmission & Derives             | 2      | 0 2      |
| AU-###        | Electives Course                                    | 3      | 0 3      | AU-441          | Product Development and Operations Management | 2      | 0 2      |
| ME-315        | Heat & Mass Transfer                                | 3      | 1 4      | AU-499          | Automotive Engineering Project                | 0      | 3 3      |
| AU-412        | FEM and FVM: Applications in Automotive Engineering | 2      | 1 3      | HS-403          | Entrepreneurship                              | 3      | 0 3      |
| AU-499        | Automotive Engineering Project *                    | 0      | 3 3      |                 |   |        |          |

**Elective Courses**

|        |   |
|--------|---|
| 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

39

## 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-120        | Basic Electrical Engineering | 3            | 1  | 4     | EE-156          | Engineering Drawing               | 0            | 2  | 2     |
| PH-122        | Applied Physics              | 3            | 1  | 4     | EE-121          | Circuit Analysis                  | 3            | 1  | 4     |
| HS-114        | Functional English           | 3            | 0  | 3     | MT-227          | Differential Equations            | 3            | 0  | 3     |
| ME-107        | Basic Mechanical Engineering | 3            | 1  | 4     | CE-105          | Engineering Surveying             | 3            | 1  | 4     |
| MT-114        | Calculus                     | 3            | 0  | 3     | EE-163          | Computers and Programming         | 3            | 1  | 4     |
|               |                              |              |    |       | HS-105          | Pakistan Studies /                | 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 and 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 and Geometry        | 3            | 0  | 3     | EE-231          | Signals and Systems               | 3            | 1  | 4     |
| MT-226        | Multi Variable Calculus            | 3            | 0  | 3     | CS-205          | Logic Design and Switching Theory | 3            | 1  | 4     |
| HS-214        | Academic Writing                   | 3            | 0  | 3     | MT-331          | Probability and Statistics        | 3            | 0  | 3     |
| HS-205/       | Islamic Studies /                  | 2            | 0  | 2     |                 |                                   |              |    |       |
| HS-209        | Ethical Behavior (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 |
| EE-343        | Electrical Machines                  | 3            | 1  | 4     | EE-361          | Power System Analysis           | 3            | 1  | 4     |
| EE-394        | Digital Signal Processing            | 2            | 1  | 3     | EE-351          | Electrical Power Transmission   | 3            | 0  | 3     |
| EE-358        | Electrical Power System Distribution | 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-442        | Numerical Methods                    | 3            | 0  | 3     | HS-304          | Business Communication & Ethics | 3            | 0  | 3     |

## FINAL YEAR

| Fall Semester |  |           |          |       | Spring Semester |                                 |           |          |       |
|---------------|--|-----------|----------|-------|-----------------|---------------------------------|-----------|----------|-------|
| Course Code   | Course Title                               | Credit Th | Hours Pr | Total | Course Code     | Course Title                    | Credit Th | Hours Pr | Total |
| EE-457        | Electrical Power System Protection         | 3         | 1        | 4     | HS-405          | Organizational Behaviour        | 3         | 0        | 3     |
| EE-411        | Power Generation                           | 3         | 0        | 3     | HS-403          | Entrepreneurship                | 3         | 0        | 3     |
| CS-430        | Microprocessor Programming and 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 and Management       | 3         | 0        | 3     | EE-401          | Electrical Engineering Project  | 0         | 6        | 6     |
| EE-401        | Electrical Engineering Project*            | -         | -        | -     |                 |                                 |           |          |       |

\* 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 Th | Hours Pr | Total | Course Code     | Course Title                | Credit Th | Hours Pr | Total |
| CS-114        | Fundamentals of Computer Engineering | 3         | 1        | 4     | CS-116          | Object Oriented Programming | 3         | 1        | 4     |
|               |                                      |           |          |       | CS-117          | Discrete Structures         | 3         | 0        | 3     |
| CS-115        | Computer Programming                 | 3         | 1        | 4     | EL-103          | Basic Electronics           | 3         | 1        | 4     |
| EE-120        | Basic Electrical Engineering         | 3         | 1        | 4     | PH-122          | Applied Physics             | 3         | 1        | 4     |
| MT-114        | Calculus                             | 3         | 0        | 3     | HS-205          | Islamic Studies OR          | 2         | 0        | 2     |
| HS-111        | Functional English                   | 2         | 0        | 2     | HS-209          | Ethical Behaviour           |           |          |       |
| HS-106        | Pakistan Studies OR                  | 1         | 0        | 1     | HSK-I           | Chinese Language            |           |          | NC    |
| HS-107        | 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 |
| CS-218        | Data Structures & Algorithms        | 3            | 1  | 4     | CS-215          | Signals and Systems            | 2            | 1  | 3     |
| CS-219        | Computer Engineering Workshop       | 0            | 1  | 1     | CS-221          | Computer Organization & Design | 3            | 1  | 4     |
| CS-220        | Digital Logic Design                | 3            | 1  | 4     | CS-222          | Database Management Systems    | 3            | 1  | 4     |
| EE-217        | Circuit Theory                      | 2            | 0  | 2     | MT-222          | Linear Algebra & Ordinary      | 3            | 0  | 3     |
| MT-224        | Complex Variable & Fourier Analysis | 3            | 0  | 3     |                 | Differential Equations         |              |    |       |
| HS-218        | Business Communication              | 2            | 1  | 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 |    |       | Course Code     | Course Title                       | Credit Hours |    |       |
|               |                                 | Th           | Pr | Total |                 |                                    | Th           | Pr | Total |
| CS-323        | Artificial Intelligence         | 3            | 1  | 4     | CS-301          | Microprocessor Based System Design | 3            | 0  | 3     |
| CS-326        | Software Engineering            | 3            | 1  | 4     | CS-329          | Operating Systems                  | 3            | 1  | 4     |
| CS-327        | Computer Communication Networks | 3            | 1  | 4     | EF-305          | Engineering Economics & Management | 3            | 0  | 3     |
| CS-328        | Computer Architecture           | 3            | 0  | 3     | MT-442          | Numerical Methods                  | 3            | 0  | 3     |
| MT-335        | Probability and Statistics      | 3            | 0  | 3     | CS-3##          | Elective 1 Courses                 | 3            | 1  | 4     |
|               |                                 |              |    |       | 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 Th | Hours Pr | Total | Course Code     | Course Title                 | Credit Th | Hours Pr | Total |
| CS-406        | Computer Engineering Project*           | 0         | 3        | 3     | CS-406          | Computer Engineering Project | 0         | 3        | 3     |
| CS-419        | Digital Signal Processing               | 3         | 1        | 4     | CS-432          | Distributed Computing        | 2         | 1        | 3     |
| CS-425        | Entrepreneurship for Computer Engineers | 3         | 0        | 3     | CS-438          | Computer System Modelling    | 3         | 0        | 3     |
| CS-431        | Digital System Design                   | 3         | 1        | 4     | HS-405          | Organizational Behaviour     | 3         | 0        | 3     |
| CS-4##        | Elective 2 Courses                      | 2         | 0        | 2     | CS-4##          | Elective 3 Courses           | 2         | 1        | 3     |
|               | CS-433 Internet Computing               |           |          |       | CS-426          | Computer Systems Security    |           |          |       |
|               | CS-434 Bioinformatics                   |           |          |       | CS-436          | Computer Vision              |           |          |       |
|               | CS-435 Software Project Management      |           |          |       | 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 |    |       | Course Code     | Course Title                      | Credit Hours |    |       |
|               |   | Th           | Pr | Total |                 |                                   | 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 Electronics                 | 3            | 1  | 4     |
| MT-171        | Differential & Integral Calculus          | 3            | 0  | 3     | MT-227          | Differential Equations            | 3            | 0  | 3     |
| EL-104        | Electronic Engineering Drawing & 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 |    |       | Course Code     | Course Title                       | Credit Hours |    |       |
|               |                                 | Th           | Pr | Total |                 |                                    | Th           | Pr | Total |
| EL-233        | 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 Behavior (for Non-Muslims) |              |    |       |
| 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 |    |       | Course Code     | Course Title                             | Credit Hours |    |       |
|               |                                    | Th           | Pr | Total |                 |  | 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

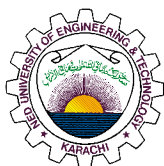
| Fall Semester |                                 |              |    |       | Spring Semester |                                |              |    |       |
|---------------|---------------------------------|--------------|----|-------|-----------------|--------------------------------|--------------|----|-------|
| Course Code   | Course Title                    | Credit Hours |    |       | Course Code     | Course Title                   | Credit Hours |    |       |
|               |                                 | Th           | Pr | Total |                 |                                | Th           | Pr | Total |
| MT-442        | Numerical Methods               | 3            | 0  | 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 Behaviour        | 3            | 0  | 3     | HS-403          | Entrepreneurship               | 3            | 0  | 3     |
| EL-###        | Elective-I                      | 3            | 1  | 4     | EL-401          | Electronic Engineering Project | 0            | 3  | 3     |
| EL-401        | Electronic Engineering Project* | 0            | 3  | 3     |                 |                                |              |    |       |

## Elective Courses

|        |  |   |   |   |
|--------|--|---|---|---|
| EL-433 | Solid State Device                     | 3 | 1 | 4 |
| EL-421 | Embedded Electronics                   | 3 | 1 | 4 |
| EL-422 | Robotics                               | 3 | 1 | 4 |
| EL-485 | Opto Electronics and Microwave Systems | 3 | 1 | 4 |

\* 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 Th | Hours Pr | Total | Course Code     | Course Title                                | Credit Th | Hours 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/<br>HS-127 | Pakistan Studies /<br>Pakistan Studies (for Foreigners) | 2         | 0        | 2     | MT-171          | Differential & Integral Calculus            | 3         | 0        | 3     |
| PH-122            | Applied Physics   | 3         | 1        | 4     | 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 |
| HS-205/       | Islamic Studies/                    | 2         | 0        | 2     | TC-212          | Digital Signal Processing       | 2         | 1        | 3     |
| HS-209        | Ethical Behaviour (for Non-Muslims) |           |          |       | CS-216          | Data Structure and Algorithms   | 3         | 0        | 3     |
| TC-202        | Signals and 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 Th | Hours Pr | Total | Course Code     | Course Title                                 | Credit Th | Hours 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 Systems           | 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 System               | 3         | 1        | 4     | TC-311          | Digital Communication and Information Theory | 3         | 1        | 4     |

#### FINAL YEAR

| Fall Semester |  |           |          |       | Spring Semester |  |           |          |       |
|---------------|--|-----------|----------|-------|-----------------|--|-----------|----------|-------|
| Course Code   | Course Title                               | Credit Th | Hours Pr | Total | Course Code     | Course Title                           | Credit Th | Hours Pr | Total |
| MT-442        | Numerical Methods                          | 3         | 0        | 3     | HS-403          | Entrepreneurship                       | 3         | 0        | 3     |
| CS-430        | Microprocessor programming and interfacing | 3         | 1        | 4     | TC-485          | Telecommunications Switching Systems   | 3         | 1        | 4     |
| TC-###        | Electives I                                | 2         | 0        | 2     | TC-###          | Electives II                           | 2         | 0        | 2     |
| HS-405        | Organization Behaviour                     | 3         | 0        | 3     | TC-490          | Telecommunications Engineering Project | 0         | 3        | 3     |
| TC-421        | Telecommunication Networks                 | 3         | 1        | 4     |                 |  |           |          |       |
| TC-490        | Telecommunications Engineering Project*    | 0         | 3        | 3     |                 |  |           |          |       |

#### Elective Courses

|        |                                    |   |   |   |
|--------|------------------------------------|---|---|---|
| TC-422 | Satellite Communication            | 2 | 0 | 2 |
| TC-423 | Navigational Aids and Radar System | 2 | 0 | 2 |
| TC-426 | Mobile and Pervasive Computing     | 2 | 0 | 2 |
| TC-427 | Digital Image Processing           | 2 | 0 | 2 |

\* 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    | Course Code     | Course Title                            | Credit | Hours    |
|               |                                       | Th     | Pr Total |                 |   | Th     | Pr Total |
| MM-102        | Introduction to Engineering Materials | 2      | 0 2      | EE-118          | Basic Electricity and Electronics       | 3      | 1 4      |
| ME-101        | Engineering Mechanics                 | 3      | 1 4      | AU-102          | Engineering Drawing & 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-111          | 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    | Course Code     | Course Title                                | Credit | Hours    |
|               |   | Th     | Pr Total |                 |   | Th     | Pr Total |
| MM-201        | Physical Metallurgy                           | 3      | 1 4      | MM-202          | Production and Refining of Materials        | 3      | 0 3      |
| MM-204        | Engineering Ceramics and Refractory Materials | 3      | 0 3      | MM-208          | Fundamental of Modern Manufacturing Foundry | 3      | 1 4      |
| MM-205        | Mechanics of Materials                        | 3      | 1 4      | MM-307          | Joining of Materials                        | 3      | 1 4      |
| MT-215        | Differential Equations and Complex Variables  | 3      | 0 3      | IM-207          | Computer Programming & Drafting             | 2      | 1 3      |
| MY-211        | Metallurgical Thermodynamics and Kinetics     | 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    | Course Code     | Course Title                                      | Credit | Hours    |
|               |                                      | Th     | Pr Total |                 |   | 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 & Analytical Technique | 3      | 1 4      |
| MM-304        | Heat Treatment of Materials          | 3      | 1 4      | MM-309          | Construction Materials                            | 2      | 0 2      |
| HS-304        | Business Communication and Ethics    | 3      | 0 3      | PF-303          | Applied Economics for Engineers                   | 3      | 0 3      |
| MT-315        | Mathematical Methods                 | 3      | 0 3      | HS-403          | Entrepreneurship                                  | 3      | 0 3      |
|               |                                      |        |          | MT-441          | Advance Mathematical Techniques                   | 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 |
| MM-404        | Phase Transformations in Materials | 3      | 1 4      | MM-402          | Design and Selection of Materials                           | 2      | 1 3      |
| MM-411        | Nanomaterial's and Nanotechnology  | 3      | 0 3      | MM-416          | Biomedical and Functional Materials                         | 2      | 0 2      |
| MM-412        | Surface Engineering                | 2      | 1 3      | MY-402          | Advance Materials   | 3      | 0 3      |
| MM-413        | Nuclear Materials                  | 2      | 0 2      | MM-415          | Material Deformations and Failures: Mechanisms and Analysis | 3      | 0 3      |
| MM-414        | Total Quality Management           | 3      | 0 3      | IM-417          | Health, Safety & 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    | Course Code     | Course Title                          | Credit | Hours    |
|               |                                 | Th     | Pr Total |                 |                                       | Th     | Pr Total |
| CH-101        | 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 and Electronics     | 3      | 1 4      |
| PH-122        | Applied Physics                 | 3      | 1 4      | HS-105          | Pakistan Studies OR                   | 2      | 0 2      |
|               |                                 |        |          | HS-127          | Pakistan Studies (for Foreigners)     |        |          |
|               |                                 |        |          | MT-114          | Calculus                              | 3      | 0 3      |
|               |                                 |        |          | 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 |
| 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          | Ordinary Differential Equations & 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 Behavior (for Non-Muslims)               |        |          |
|               |  |        |          | CH-212          | Particulate Technology                           | 2      | 1 3      |

**THIRD YEAR**

| Fall Semester |                                    |        |          | Spring Semester |                                 |        |          |
|---------------|------------------------------------|--------|----------|-----------------|---------------------------------|--------|----------|
| Course Code   | Course Title                       | Credit | Hours    | Course Code     | Course Title                    | Credit | Hours    |
|               |                                    | Th     | Pr Total |                 |                                 | 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 & 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    | Course Code     | Course Title                         | Credit | Hours    |
|               |                                  | Th     | Pr Total |                 |                                      | Th     | Pr Total |
| CH-401        | Process Modelling & Simulation   | 3      | 1 4      | CH-417          | Industrial Safety & Maint Mang       | 2      | 0 2      |
| CH-414        | Chemical Plant Design            | 2      | 0 2      | CH-418          | Industrial Organisation & Management | 2      | 0 2      |
| CH-404        | Chemical Process Optimisation    | 3      | 1 4      | CH-##           | Electives                            | 2      | 0 2      |
| CH-416        | Pet. Ref & 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      |

**Elective Courses**

|        |                                 |
|--------|---------------------------------|
| CH-408 | Polymer Technology              |
| CH-410 | Water Purification              |
| 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

45

| Fall Semester |   |              |    |       | Spring Semester |                                  |              |    |       |
|---------------|---|--------------|----|-------|-----------------|----------------------------------|--------------|----|-------|
| Course Code   | Course Title                              | Credit Hours |    |       | Course Code     | Course Title                     | Credit Hours |    |       |
|               |   | Th           | Pr | Total |                 |                                  | Th           | Pr | Total |
| MY-101        | Introduction to Metallurgical Engineering | 2            | 1  | 3     | EE-116          | Principles of Electrical Engg.   | 3            | 1  | 4     |
|               |   |              |    |       | HS-105/         | Pakistan Studies/                | 2            | 0  | 2     |
| HS-111        | Functional English                        | 3            | 0  | 3     | HS-127          | Pakistan Studies (for Foreigner) |              |    |       |
| PH-122        | Applied Physics                           | 3            | 1  | 4     | ME-101          | Engineering Mechanics            | 3            | 1  | 4     |
| ME-111        | Engineering Drawing                       | 2            | 1  | 3     | ME-104          | Workshop Practice                | 0            | 2  | 2     |
| MT-114        | Calculus                                  | 3            | 0  | 3     | CY-109          | Applied Chemistry                | 3            | 1  | 4     |
|               |   |              |    |       | 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 |
| MT-215        | Differential Equation and Complex Variables | 3         | 0        | 3     | MY-210          | Iron Making Processes                    | 2         | 0        | 2     |
| MY-206        | Furnaces 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 of 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          | Metallugical Thermodynamics and Kinetics | 3         | 0        | 3     |
| HSK-II        | Chinese Language                            |           |          | NC    |                 |  |           |          |       |

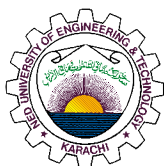
## THIRD YEAR

| Fall Semester |   |              |    |       | Spring Semester |                                   |              |    |       |
|---------------|---|--------------|----|-------|-----------------|-----------------------------------|--------------|----|-------|
| Course Code   | Course Title                              | Credit Hours |    |       | Course Code     | Course Title                      | Credit Hours |    |       |
|               |   | Th           | Pr | Total |                 |                                   | Th           | Pr | Total |
| MM-303        | Inspection and Testing of Materials       | 3            | 1  | 4     | MY-304          | Metallurgy of Welding             | 2            | 1  | 3     |
| MY-308        | Polymers and 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 |    |       | Course Code     | Course Title  | Credit Hours |    |       |
|               |   | Th           | Pr | Total |                 |   | 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          | Ind. Org & Management                                     | 2            | 1  | 3     |
| MY-410        | Fracture Mechanics and Failure analysis | 2            | 1  | 3     | MY-407          | Design, Selection and Characterization of Engg. 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 Engg. Project                               | 0            | 3  | 3     |
| MY-408        | Metallurgical Engg. 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 4      | HS-105/         | Pakistan Studies OR               | 2      | 0 2      |
| MT-114        | Calculus                       | 3      | 0 3      | HS-127          | Pakistan Studies (for Foreigners) |        |          |
| PP-103        | Workshop Practice              | -      | 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          | Polymer Materials, & Their Characterization | 3      | 0 3      |
| PP-211        | Computer Programming & Applications | 2      | 1 3      | MM-205          | Mechanics of Material                       | 3      | 1 4      |
| MT-330        | Applied Probability & 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 (for Non-Muslims) |        |          |                 |   |        |          |
| 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 Organisation and Management | 2      | 1 3      |
| PP-309        | Mass Transfer                   | 3      | 0 3      | PP-311          | Chemical Reaction Engineering          | 3      | 0 3      |
| MT-471        | Applied Numerical Methods       | 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**                             | 2      | 0 2      |
| PP-413        | Process Optimization                         | 3      | 0 3      | HS-403          | Entrepreneurship                              | 3      | 0 3      |
| PP-408        | Polymer & Petrochemical Engineering Project* | -      | 3 3      | PP-408          | Polymer and Petrochemical Engineering Project | 0      | 3 3      |
| PP-421        | Polymer & Petrochemical Lab-VI               | 0      | 1 1      |                 |   |        |          |

#### Elective Courses \*\*

|        |                                |   |     |
|--------|--------------------------------|---|-----|
| PP-412 | Environmental Engineering      | 2 | 0 2 |
| PP-425 | Polymer Rheology               | 2 | 0 2 |
| PP-427 | Rubber Technology              | 2 | 0 2 |
| PP-428 | Process Modelling & 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 Th | Hours Pr | Total | Course Code     | Course Title                           | Credit Th | Hours Pr | Total |
| CT-175        | Programming Fundamentals               | 3         | 1        | 4     | SE-207          | Software Engineering                   | 3         | 0        | 3     |
| CT-174        | Fundamentals of Information Technology | 2         | 1        | 3     | SE-201          | Object Oriented Concepts & Programming | 3         | 1        | 4     |
| CT-162        | Discrete Structures                    | 3         | 0        | 3     | PH-122          | Applied Physics                        | 3         | 1        | 4     |
| HS-104        | Functional English                     | 3         | 0        | 3     | HS-115          | Academic Reading & 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 (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 Th | Hours Pr | Total | Course Code     | Course Title                   | Credit Th | Hours Pr | Total |
| CT-157        | Data Structure Algorithms & Applications | 3         | 1        | 4     | SE-204          | Database Management Systems    | 3         | 1        | 4     |
| CS-258        | Financial and Cost Accounting            | 3         | 0        | 3     | SE-308          | Software Design & Architecture | 2         | 1        | 3     |
| SE-208        | Software Requirement Engineering         | 3         | 0        | 3     | SE-206          | Web Engineering                | 3         | 1        | 4     |
| MT-273        | Differential Equations & Linear Algebra  | 3         | 0        | 3     | MT-331          | Probability and Statistics     | 3         | 0        | 3     |
| HS-218        | Business Communication                   | 2         | 1        | 3     | HS-219          | Professional Ethics            | 2         | 0        | 2     |
| HSK-II        | Chinese Language                         |           |          | NC    |                 |                                |           |          |       |

## THIRD YEAR

| Fall Semester |  |           |          |       | Spring Semester |                                 |           |          |       |
|---------------|--|-----------|----------|-------|-----------------|---------------------------------|-----------|----------|-------|
| Course Code   | Course Title                           | Credit Th | Hours Pr | Total | Course Code     | Course Title                    | Credit Th | Hours Pr | Total |
| SE-312        | Software Construction & Development    | 2         | 1        | 3     | SE-309          | Software Quality Engineering    | 3         | 1        | 4     |
| SE-302        | Human Computer Interaction             | 3         | 0        | 3     | SE-310          | Software Project Management     | 3         | 0        | 3     |
| SE-303        | Operating Systems                      | 3         | 1        | 4     | SE-311          | E-Commerce                      | 3         | 0        | 3     |
| SE-313        | Formal Methods in Software Engineering | 3         | 0        | 3     | SE-###          | Elective - I                    | 2         | 1        | 3     |
| IF-301        | Applied Economics for Engineers        | 3         | 0        | 3     | CS-351          | Computer Communication Networks | 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 |
| SE-405        | Modeling & Simulation          | 3            | 0  | 3     | HS-403          | Entrepreneurship             | 3            | 0  | 3     |
| CT-460        | Network & Information Security | 3            | 1  | 4     | SE-410          | Stochastic Processes         | 3            | 0  | 3     |
| SE-409        | Software Re-Engineering        | 3            | 0  | 3     | SE-408          | Design Patterns              | 3            | 0  | 3     |
| SE-###        | Elective - II                  | 3            | 1  | 4     | SE-###          | Elective - III               | 3            | 0  | 3     |
| SE-499        | Software Engineering Project*  | -            | 3  | 3     | SE-499          | Software Engineering Project | 0            | 3  | 3     |

## Elective-I &amp; Elective-II Courses

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

## Elective-III Courses

|        |  |
|--------|--|
| 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 Th | Hours Pr Total | Course Code     | Course Title                           | Credit Th | Hours Pr Total |
| BM-120/       | Introduction to Biology                | 3         | 1 4            | MT-114          | Calculus                               | 3         | 0 3            |
| MT-100        | Introduction to Mathematics            | 4         | 0 4            | EE-119          | Fundamentals of Electrical Engineering | 3         | 1 4            |
| BM-101        | Introduction to Biomedical Engineering | 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            |
| CS-113        | Introduction to Computing              | 1         | 1 2            | HS-127          | Pakistan Studies (for Foreigners)      | 2         | 0 2            |
| HS-111        | Functional English                     | 2         | 0 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 Th | Hours Pr Total | Course Code     | Course Title                                    | Credit Th | Hours 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 Equation & 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 Behavior (for Non-Muslims)              | 3         | 1 4            |
| HSK-II        | Chinese Language          |           | NC             | BM-208          | Biomedical Electronics                          | 3         | 1 4            |

#### THIRD YEAR

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

#### FINAL YEAR

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

#### Elective Courses

|        |                          |   |     |        |  |   |     |
|--------|--------------------------|---|-----|--------|--|---|-----|
| 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 Engineering | 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 | Biomedicines             | 2 | 1 3 | BM-432 | Neuroscience & Neural Networks           | 2 | 1 3 |
| BM-435 | Biophysics               | 3 | 0 3 |        |  |   |     |

\* Duration of Biomedical Engineering Project is one year & grades would be awarded at the end of the year.

## 3.1.19 Food Engineering

49

## FIRST YEAR

| Fall Semester |   |              |    | Spring Semester |                                   |              |    |
|---------------|---|--------------|----|-----------------|-----------------------------------|--------------|----|
| Course Code   | Course Title  | Credit Hours |    | Course Code     | Course Title                      | Credit Hours |    |
|               |   | Th           | Pr | Th              | Pr                                | Th           | Pr |
| BM-100        | Introduction to Biology<br>(For Pre-Engineering Students) |              |    | CY-108          | Analytical Chemistry              | 3            | 1  |
| FD-101        | Introduction to Food Engineering                          | 3            | 0  | EL-232          | Electronics                       | 3            | 1  |
| PH-126        | Physics   | 3            | 1  | CS-103          | Programming Languages             | 2            | 2  |
| CY-106        | Chemistry   | 3            | 1  | MT-114          | Calculus                          | 3            | 0  |
| HS-104        | Functional English  | 3            | 0  | HS-105/         | Pakistan Studies OR               | 2            | 0  |
| BM-108        | Computer Aided Engineering Graphics                       | 1            | 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 | Th              | Pr                                 | Th           | Pr |
| FD-201        | Thermodynamics                     | 3            | 1  | FD-204          | Food Biochemistry                  | 3            | 1  |
| BM-201        | Engineering Mechanics              | 3            | 1  | FD-205          | Fluid Mechanics                    | 3            | 1  |
| MT-223        | Differential Equ. & Fourier Series | 3            | 0  | MM-205          | Mechanics of Materials             | 3            | 1  |
| FD-203        | Food Chemistry                     | 3            | 1  | FD-206          | Food Enzymology                    | 2            | 1  |
| HS-205/       | Islamic Studies OR                 | 2            | 0  | MT-332          | Advanced Calculus & Linear Algebra | 3            | 0  |
| HS-209        | Ethical Behavior (for Non-Muslims) |              |    |                 |                                    |              |    |
| HSK-II        | Chinese Language                   |              |    |                 |                                    |              |    |

## THIRD YEAR

| Fall Semester |  |              |    | Spring Semester |  |              |    |
|---------------|--|--------------|----|-----------------|--|--------------|----|
| Course Code   | Course Title                                     | Credit Hours |    | Course Code     | Course Title                           | Credit Hours |    |
|               |  | Th           | Pr | Th              | Pr                                     | Th           | Pr |
| FD-301        | Unit Operations in Food Engineering-I            | 3            | 1  | FD-304          | Food Microbiology                      | 3            | 1  |
| FD-305        | Machine Design For Food Engineers                | 3            | 0  | FD-307          | Heat & Mass Transfer                   | 3            | 1  |
| FD-306        | Instrumentation & Measurement for food Engineers | 3            | 1  | FD-308          | Unit Operations in Food Engineering-II | 3            | 1  |
| MT-330        | Applied Probability and Statistics               | 2            | 1  | MT-442          | Numerical Methods                      | 3            | 0  |
| HS-304        | Business Communications & Ethics                 | 3            | 0  | BF-303          | Applied Economics for Engineers        | 3            | 0  |

## FINAL YEAR

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

## Elective Courses

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

\* 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 106          | Computer Applications in Development-I  | 1      | 3 4      |
| DS 103        | Introduction to Accounting             | 3      | 0 3      | DS 107          | Communication Skills for Development-II | 2      | 2 4      |
| HS 104        | Functional English                     | 3      | 0 3      | DS-110          | Principles of Economics-II              | 3      | 0 3      |
| 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    | Course Code     | Course Title                               | Credit | Hours    |
|               |   | Th     | Pr Total |                 |  | Th     | Pr Total |
| DS 201        | Field Survey Methods-I                    | 2      | 2 4      | DS 207          | Statistical Applications in Development-II | 3      | 0 3      |
| DS 202        | Theory and Practice 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 Applications in Development-II   | 1      | 3 4      | HS 205          | Islamic Studies OR                         | 2      | 0 2      |
| DS 211        | Development Economics                     | 3      | 0 3      | HS 209          | Ethical Behaviour (for Non Muslims)        |        |          |
| DS-206        | Statistical Applications in Development-I | 3      | 0 3      | DS 210          | Field Survey Methods-II                    | 2      | 3 5      |
| 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 |
| DS 302        | Development Planning Workshop-I | 1      | 3 4      | DS 316          | Gender and Development                       | 3      | 0 3      |
| DS 303        | Legal Issues in Development     | 3      | 0 3      | DS 306          | Public Administration                        | 3      | 0 3      |
| DS 304        | Urban Development               | 3      | 1 4      | DS 307          | Agricultural Development                     | 3      | 0 3      |
| DS 305        | Management of Organisation-II   | 3      | 0 3      | DS 308          | Development Planning Workshop-II             | 1      | 3 4      |
| DS 309        | Linear Programming              | 3      | 0 3      | MT-336          | Introduction to Linear Algebra and Programme | 3      | 0 3      |
| DS ###        | Elective                        | 3      | 0 3      | DS-313          | Political Economy                            | 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 |
| DS 401        | Development Studies Project*        | 0      | 3 3      | DS 401          | Development Studies Project      | 0      | 3 3      |
| DS 402        | Development Planning Workshop-III   | 1      | 3 4      | DS 408          | Sustainability in Development    | 3      | 0 3      |
| DS 404        | Entrepreneurship                    | 3      | 0 3      | DS 409          | Microfinance-II                  | 3      | 0 3      |
| DS 405        | Microfinance-I                      | 3      | 0 3      | DS 410          | Development Planning in Pakistan | 3      | 0 3      |
| DS 406        | Environmental Issues in Development | 3      | 0 3      |                 |                                  |        |          |
| DS ###        | Elective Courses                    | 3      | 0 3      |                 |                                  |        |          |

#### Elective Courses

|        |  |   |     |        |   |   |     |
|--------|--|---|-----|--------|---|---|-----|
| DS 422 | Case Studies in Agricultural Development                       | 3 | 0 3 | DS 310 | Budgeting in Development Project  | 3 | 0 3 |
| DS 419 | Case Studies in Development Projects                           | 3 | 0 3 | DS 311 | Project Planning and Management   | 3 | 0 3 |
| DS 421 | Corporate Social Responsibility and Application in Development | 3 | 0 3 | DS 312 | Public Health   | 3 | 0 3 |
|        |  |   |     | DS 314 | Taraqati Sargarmiyon Main Urdu ka Istemal (Usage of Urdu in Development). | 3 | 0 3 |

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



## 3.2.2 Management Sciences

51

## FIRST YEAR

| Fall Semester |                                   |              |    |       | Spring Semester |                                      |              |    |       |
|---------------|-----------------------------------|--------------|----|-------|-----------------|--------------------------------------|--------------|----|-------|
| Course Code   | Course Title                      | Credit Hours |    |       | Course Code     | Course Title                         | Credit Hours |    |       |
|               |                                   | Th           | Pr | Total |                 |                                      | Th           | Pr | Total |
| HS 104        | Functional English                | 3            | 0  | 3     | MT 155          | Introduction of Financial Accounting | 3            | 0  | 3     |
| CT 158        | Fundamentals of IT                | 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 113          | Introduction to Business             | 3            | 0  | 3     |
| MG 111        | Principles of Marketing           | 3            | 0  | 3     |                 | Organization                         |              |    |       |
| HS 105        | Pakistan Studies OR               | 3            | 0  | 3     | HS 205          | Islamic Studies OR                   | 2            | 0  | 2     |
| HS 127        | Pakistan Studies (for Foreigners) | 3            | 0  | 3     | HS 209          | Ethical Behaviour (for Non-Muslims)  |              |    |       |
|               |                                   |              |    |       | HSK-I           | Chinese Language                     |              |    | NC    |

## SECOND YEAR

| Fall Semester |                                  |              |    | Spring Semester |             |                           |              |    |       |
|---------------|----------------------------------|--------------|----|-----------------|-------------|---------------------------|--------------|----|-------|
| Course Code   | Course Title                     | Credit Hours |    | Total           | Course Code | Course Title              | Credit Hours |    |       |
|               |                                  | Th           | Pr |                 |             |                           | Th           | Pr | Total |
| HS 201        | Oral Communication               | 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 Th | Hours Pr | Total | Course Code     | Course Title                             | Credit Th | Hours 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 |    |       | Course Code | Course Title                | Credit Hours |    |       |                 |  |  |  |  |  |  |  |  |  |
|               |                     | Th           | Pr | Total |             |                             | Th           | Pr | Total |                 |  |  |  |  |  |  |  |  |  |
| MG 4XX        | Electives - 1       | 3            | 0  | 3     | MG 4XX      | Electives -6                | 3            | 0  | 3     |                 |  |  |  |  |  |  |  |  |  |
| MG 4XX        | Electives -2        | 3            | 0  | 3     | MG 4XX      | Electives -7                | 3            | 0  | 3     |                 |  |  |  |  |  |  |  |  |  |
| MG 4XX        | Electives -3        | 3            | 0  | 3     | CT 461      | E-Commerce                  | 3            | 1  | 4     |                 |  |  |  |  |  |  |  |  |  |
| MG 4XX        | Electives -4        | 3            | 0  | 3     | MG 480      | Business Process Management | 2            | 1  | 3     |                 |  |  |  |  |  |  |  |  |  |
| MG 4XX        | Electives -5        | 3            | 0  | 3     | MG 499      | Final Year Project          | 0            | 3  | 3     |                 |  |  |  |  |  |  |  |  |  |
| MG 499        | Final Year Project* | 0            | 3  | 3     |             |                             |              |    |       |                 |  |  |  |  |  |  |  |  |  |

## Elective Courses

| Supply Chain Management |                                       |        |    |             | Marketing   |                                      |        |    |             |
|-------------------------|---------------------------------------|--------|----|-------------|-------------|--------------------------------------|--------|----|-------------|
| Course Code             | Course Title                          | Credit |    | Hours Total | Course Code | Course Title                         | Credit |    | Hours Total |
|                         |                                       | Th     | Pr |             |             |                                      | Th     | Pr |             |
| MG 450                  | Principles of Supply Chain Management | 3      | 0  | 3           | MG 460      | Marketing Strategy                   | 3      | 0  | 3           |
| MG 451                  | Green Supply Chain Management         | 3      | 0  | 3           | MG 461      | Global Entrepreneurial Marketing     | 3      | 0  | 3           |
| MG 452                  | Information Technology for SCM        | 3      | 0  | 3           | MG 462      | Introduction to Advertising          | 3      | 0  | 3           |
| MG 453                  | Supply Chain Inventory                | 3      | 0  | 3           | MG 463      | Corporation & Consumer Behaviour     | 3      | 0  | 3           |
| MG 454                  | Supply Planning & Control Systems     | 3      | 0  | 3           | MG 464      | Personal Selling and Public Relation | 3      | 0  | 3           |
| MG 455                  | Business Process Simulation           | 3      | 0  | 3           | MG 465      | Trade and Consumer Promotions        | 3      | 0  | 3           |
| MG 456                  | Procurement Management                | 3      | 0  | 3           | MG 466      | Advertising Management               | 3      | 0  | 3           |

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

\* All Electives will be selected from any one of the two Specializations.



### 3.2.3 Textile Sciences

#### 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-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     | HS-105          | Pakistan Studies OR               | 2            | 0  | 2     |
| TS-109        | Introduction to Textiles  | 2            | 1  | 3     | HS-127          | Pakistan Studies (for Foreigners) |              |    |       |
| TS-102        | Textile Raw Materials – I | 2            | 1  | 3     | PH-122          | Applied Physics                   | 3            | 1  | 4     |
|               |                           |              |    |       | TS-108          | Textile Raw Materials –II         | 3            | 0  | 3     |
|               |                           |              |    |       | 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 |
| HS-205        | Islamic Studies OR                                  | 2            | 0  | 2     | MF-303          | Applied Economics for Engineers | 3            | 0  | 3     |
| HS-209        | Ethical behavior (for Non-Muslims)                  |              |    |       | TS-206          | Yarn Production Processes       | 3            | 1  | 4     |
| TS-209        | Colour Science                                      | 3            | 1  | 4     | TS-208          | Weaving Preparatory Processes   | 3            | 1  | 4     |
| TS-205        | Pre-Spinning Processes                              | 3            | 1  | 4     | TS-233          | Textile Testing-I               | 3            | 1  | 4     |
| TS-207        | High Performance Fibres                             | 3            | 0  | 3     | TS-245          | Pre-Treatment in Textiles       | 3            | 1  | 4     |
| MT-225        | Linear Algebra & Ordinary<br>Differential Equations | 3            | 0  | 3     |                 |                                 |              |    |       |
| ME-217        | Elements of Machine Design &<br>Dynamics            | 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 |
| TS-341        | Advanced Yarn production Processes | 3            | 1  | 4     | TS-361          | Textile Testing - II           | 3            | 1  | 4     |
|               |                                    |              |    |       | TE-307          | Utilities for Textile Industry | 3            | 1  | 4     |
| TS-356        | Textile Dyeing                     | 3            | 1  | 4     | TS-358          | Textile Printing               | 3            | 1  | 4     |
| TS-343        | Weaving Mechanisms                 | 3            | 1  | 4     | TS-354          | Knitting Technology            | 3            | 0  | 3     |
| TE-305        | Quality Control in Textiles        | 2            | 0  | 2     | HS-405          | Organizational Behavior        | 3            | 0  | 3     |
| HS-304        | Business Communication & Ethics    | 3            | 0  | 3     |                 |                                |              |    |       |

#### FINAL YEAR

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

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

## 3.2.4 Computer Science

## FIRST YEAR

| Fall Semester |                                     |           |                | Spring Semester |                                   |           |                |
|---------------|-------------------------------------|-----------|----------------|-----------------|-----------------------------------|-----------|----------------|
| Course Code   | Course Title                        | Credit Th | Hours Pr Total | Course Code     | Course Title                      | Credit Th | Hours Pr Total |
| CT-175        | Programming Languages               | 3         | 1 4            | CS-251          | Logic Design & Switching Theory   | 3         | 1 4            |
| CT-174        | Fundamentals of Information Tech.   | 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 (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 Th | Hours Pr Total | Course Code     | Course Title                         | Credit Th | Hours Pr Total |
| CT-157        | Data Structure Algorithms & Applications | 3         | 1 4            | CS-252          | Computer Architecture & Organisation | 3         | 1 4            |
| CT-259        | System Analysis Design                   | 3         | 0 3            | CT-257          | Database Management Systems          | 3         | 1 4            |
| MT-227        | Differential Equations                   | 3         | 0 3            | HS-218          | Business Communication               | 2         | 1 3            |
| HS-115        | Academic Reading & Writing               | 3         | 0 3            | MT-272          | Linear Algebra & Geometry            | 3         | 0 3            |
| HS-219        | Professional Ethics                      | 2         | 0 2            | CT-258          | Financial & Cost Accounting          | 3         | 0 3            |
| HSK-II        | Chinese Language                         |           | NC             |                 |                                      |           |                |

## THIRD YEAR

| Fall Semester |   |           |                | Spring Semester |  |           |                |
|---------------|---|-----------|----------------|-----------------|--|-----------|----------------|
| Course Code   | Course Title                            | Credit Th | Hours Pr Total | Course Code     | Course Title                             | Credit Th | Hours Pr Total |
| CT-365        | Visual Programming                      | 3         | 0 3            | CS-351          | Computer Communication Networks          | 3         | 1 4            |
| CT-363        | Design & Analysis of Algorithms         | 3         | 0 3            | CT-362          | Web Engineering                          | 3         | 1 4            |
| CT-353        | Operating Systems                       | 3         | 1 4            | CT-367          | Theory of Programming Languages          | 3         | 0 3            |
| MT-331        | Probability & Statistics                | 3         | 0 3            | CT-361          | Artificial Intelligence & Expert Systems | 3         | 1 4            |
| CT-364        | Theory of Automata and Formal Languages | 3         | 0 3            | MT-442          | Numerical Methods                        | 3         | 0              |

## FINAL YEAR

| Fall Semester |                                |           |                | Spring Semester |                                  |           |                |
|---------------|--------------------------------|-----------|----------------|-----------------|----------------------------------|-----------|----------------|
| Course Code   | Course Title                   | Credit Th | Hours Pr Total | Course Code     | Course Title                     | Credit Th | Hours Pr Total |
| HS-405        | Organisational Behaviour       | 3         | 0 3            | CS-428          | Parallel & Distributed Computing | 3         | 1 4            |
| CT-###        | Elective-I                     | 3         | 0 3            | HS-403          | Entrepreneurship                 | 3         | 0 3            |
| CT-460        | Network & Information Security | 3         | 1 4            | CT-465          | Compiler Design                  | 3         | 0 3            |
| CT-###        | Elective-II                    | 3         | 1 4            | CT-###          | Elective-III                     | 3         | 1 4            |
| MT-499        | Software Based Project*        | 0         | 3 3            | CT-499          | Software Based Project           | 0         | 3 3            |

## Elective-I Courses

|        |                             |
|--------|-----------------------------|
| CT-366 | E-Commerce                  |
| CT-485 | Natural Language Processing |
| CT-464 | Modelling & Simulation      |

## Elective-II &amp; Elective-III Courses

|        |                                      |
|--------|--------------------------------------|
| CT-352 | Computer Graphics                    |
| CT-360 | Visual Programming                   |
| CT-462 | Distributed Computing                |
| CT-463 | Data Warehousing & Mining            |
| CT-481 | Wireless Networks & 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 Th | Hours Pr | Total | Course Code     | Course Title                      | Credit Th | Hours 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     | MT-156          | Discrete Mathematics              | 3         | 0        | 3     |
| MT-155        | Introduction to Financial Accounting | 3         | 0        | 3     | CT-157          | Data Structure Algorithm &        | 3         | 1        | 4     |
| HS-205/       | Islamic Studies /                    | 2         | 0        | 2     |                 | Application                       |           |          |       |
| HS-209        | Ethical Behaviour (for Non-Muslims)  |           |          |       | HS-105/         | Pakistan Studies/                 | 2         | 0        | 2     |
| CT-153        | Programming Languages                | 2         | 1        | 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 |
| MT-251        | Multivariate Calculus                    | 4            | 0  | 4     | MT-254          | Statistical Inference                | 3            | 0  | 3     |
| MT-252        | Introduction to Probability & Statistics | 3            | 1  | 4     | MT-255          | Introduction to Mathematical Finance | 3            | 0  | 3     |
| HS-201        | Oral Communication                       | 2            | 1  | 3     | MT-227          | Differential Equations               | 3            | 0  | 3     |
| MT-253        | Microeconomics                           | 3            | 0  | 3     | MT-256          | Macroeconomics                       | 3            | 0  | 3     |
| MT-272        | Linear Algebra & Geometry                | 3            | 0  | 3     | MT-257          | Stochastic Claculus                  | 3            | 0  | 3     |
| HSK-I         | Chinese Language                         |              |    | NC    |                 |                                      |              |    |       |

#### THIRD YEAR

| Fall Semester |   |           |          |       | Spring Semester |                              |           |          |       |
|---------------|---|-----------|----------|-------|-----------------|------------------------------|-----------|----------|-------|
| Course Code   | Course Title                              | Credit Th | Hours Pr | Total | Course Code     | Course Title                 | Credit Th | Hours 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 Communication | 3         | 0        | 3     | HS-311          | Logic & Critical Thinking    | 3         | 0        | 3     |

#### FINAL YEAR

| Fall Semester |                                |           |          |       | Spring Semester |                               |           |          |       |
|---------------|--------------------------------|-----------|----------|-------|-----------------|-------------------------------|-----------|----------|-------|
| Course Code   | Course Title                   | Credit Th | Hours Pr | Total | Course Code     | Course Title                  | Credit Th | Hours 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-###        | Electives-1                    | 3         | 0        | 3     | MT-###          | Electives-3                   | 3         | 0        | 3     |
| MT-###        | Electives-2                    | 3         | 0        | 3     | MT-###          | Electives-4                   | 3         | 0        | 3     |
| MT-460        | Computational Finance Project* | 0         | 3        | 3     | MT-460          | Computational Finance Project | 0         | 3        | 3     |

##### Elective Courses

MT-452 Financial Modelling  
MT-453 Organizational Design and Implementation  
MT-454 Fuzzy Sets and Fuzzy Logic

##### Elective Courses

MT-457 Numerical Computing in Finance  
MT-458 Islamic Banking & Financial System  
MT-459 Actuarial Science

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

## 3.2.6 Applied Physics

55

## FIRST YEAR

| Fall Semester |                                   |        |          | Spring Semester |                         |        |          |
|---------------|-----------------------------------|--------|----------|-----------------|-------------------------|--------|----------|
| Course Code   | Course Title                      | Credit | Hours    | Course Code     | Course Title            | Credit | Hours    |
|               |                                   | Th     | Pr Total |                 |                         | Th     | Pr Total |
| HS-105/       | Pakistan Studies OR               |        |          | HS-104          | Functional English      | 3      | 0 3      |
| HS-127        | Pakistan Studies (For Foreigners) | 2      | 0 2      | MT-227          | Differential Equations  | 3      | 0 3      |
| CS-101        | Introduction to Computer          | 2      | 1 3      | EL-255          | Programming Language    | 2      | 1 3      |
| MT-173        | Calculus                          | 3      | 0 3      | PH-104          | Waves & Oscillations    | 2      | 0 2      |
| PH-101        | Mechanics & Properties of Matter  | 3      | 0 3      | PH-105          | Electricity & Magnetism | 3      | 0 3      |
| PH-102        | Heat & Thermodynamics             | 2      | 0 2      | PH-106          | Physics Lab-II          | 0      | 1 1      |
| CY-115        | General Chemistry-I               | 2      | 1 3      | CY-116          | General Chemistry-II    | 2      | 1 3      |
| PH-103        | Physics Lab-I                     | 0      | 1 1      | 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 |
| HS-205/       | Islamic Studies OR                  |        |          | PH-205          | Classical Mechanics                    | 3      | 0 3      |
| HS-209        | Ethical Behaviour (for Non-Muslims) | 2      | 0 2      | PH-204          | Introduction to Materials Science      | 3      | 0 3      |
| HS-201        | Oral Communication                  | 2      | 1 3      | MT-331          | Probability & Statistics               | 3      | 0 3      |
| PH-201        | Optics                              | 2      | 0 2      | MT-228          | Complex Variables & Fourier Transforms | 3      | 0 3      |
| PH-202        | Modern Physics                      | 3      | 0 3      | EL-238          | Digital Electronics                    | 3      | 1 4      |
| PH-203        | Physics Lab-III                     | 0      | 1 1      | PH-206          | Physics Lab-IV                         | 0      | 1 1      |
| MT-272        | Linear Algebra & Geometry           | 3      | 0 3      |                 |  |        |          |
| EL-232        | Electronics                         | 3      | 1 4      |                 |  |        |          |
| 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 |
| 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    | Course Code     | Course Title                                     | Credit | Hours    |
|               |                            | Th     | Pr Total |                 |  | Th     | Pr Total |
| PH-401        | Computational Physics      | 2      | 0 2      | ##-##           | Elective-2                                       | 2/3    | 1/0 3    |
| PH-409        | Atomic & Molecular Physics | 3      | 0 3      | EL-344          | Power Electronics                                | 3      | 1 4      |
| PH-403        | Solid State Physics-II     | 3      | 0 3      | PH-412          | Introduction to Nanoscience and Nanotechnologies | 2      | 0 2      |
| PH-417        | Nuclear Physics            | 3      | 0 3      | PH-413          | Surface Sciences                                 | 2      | 0 5      |
| PH-407        | Applied Physics Project*   | 0      | 3 3      | PH-407          | Applied Physics Project                          | 0      | 3 3      |
| PH-###        | Elective-1                 | 3      | 1 4      |                 |  |        |          |
| PH-408        | Physics Lab-VII            | 0      | 1 1      |                 |  |        |          |
| PH-415        | Statistical Mechanics      | 3      | 0 3      |                 |  |        |          |

## Elective Courses

| MATERIALS ENGINEERING |                                      | ELECTRONIC ENGINEERING |                                       | SPACE PHYSICS |                               |
|-----------------------|--------------------------------------|------------------------|---------------------------------------|---------------|-------------------------------|
| MM-401                | Material Characterization Techniques | EL-484                 | Optoelectronics and Microwave Systems | PH-416        | Space Physics                 |
| MY-402                | Advanced Materials                   | EL-333                 | Integrated Circuits                   | PH-411        | Applications of Space Physics |

\* 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 Total     | Course Code | Course Title                          | Credit |    | Hours Total |
|               |                            | Th     | Pr |                 |             |                                       | Th     | Pr |             |
| 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               | HS-105/     | Pakistan Studies/                     | 2      | 0  | 2           |
| PH-123        | General Physics-I          | 2      | 1  | 3               | HS-127      | Pakistan Studies (for Foreigners)     |        |    |             |
| MT-173        | Calculus                   | 3      | 0  | 3               | EE-119      | Fundamental of Electrical Engineering | 3      | 1  | 4           |
|               |                            |        |    |                 | CT-158      | Fundamental of Information Technology | 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 | Course Code     | Course Title                | Credit |    | Hours |
|               |  | Th     | Pr | Total |                 |                             | 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/                                 | 2      | 0  | 2     | HS-201          | Oral Communication          | 2      | 1  | 3     |
| HS-209        | Ethical Behavior (for Non-Muslims)               |        |    |       | 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 |    |       | Course Code     | Course Title                  | Credit Hours |    |       |
|               |                                       | Th           | Pr | Total |                 |                               | Th           | Pr | Total |
| CY-313        | Polymer Science                       | 3            | 0  | 3     | CY-404          | Separation Techniques         | 3            | 0  | 3     |
| CY-305        | Industrial Stoichiometry              | 3            | 0  | 3     | CY-303          | Reaction Kinetics             | 3            | 0  | 3     |
| CY-310        | Industrial Chemistry Lab V            | 0            | 1  | 1     | CY-308          | Unit Processes                | 3            | 0  | 3     |
| HS-301        | Business & Organizational Commination | 3            | 0  | 3     | CY-311          | Industrial Chemistry Lab-VI   | 0            | 1  | 1     |
| CH-206        | Thermodynamics                        | 3            | 1  | 4     | CY-314          | Natural Products              | 3            | 0  | 3     |
| CY-312        | Spectroscopy                          | 3            | 0  | 3     | 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 Th | Hours Pr | Total | Course Code     | Course Title                 | Credit Th | Hours 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-III                 | -         | -        | -     |
| ###-##        | Elective-I                                 | -         | -        | -     | ###-##          | Elective-IV                  | -         | -        | -     |
| ###-##        | Elective-II                                | -         | -        | -     | CY-415          | Industrial Chemistry Project | 0         | 3        | 3     |
| CY-415        | Industrial Chemistry Project*              | 0         | 3        | 3     |                 |                              |           |          |       |

#### Elective Courses

|        |                          |   |   |   |        |                                      |   |   |   |
|--------|--------------------------|---|---|---|--------|--------------------------------------|---|---|---|
| CY-403 | Beverage Technology      | 3 | 0 | 3 | CY-411 | Surface Coatings                     | 3 | 0 | 3 |
| CY-406 | Fat & Oil Processing     | 3 | 0 | 3 | CY-413 | Surfactants and Cosmetics            | 3 | 0 | 3 |
| CY-414 | Pharmaceutical Chemistry | 3 | 0 | 3 | CH-406 | Petroleum Refining & Petrochemicals  | 3 | 0 | 3 |
|        |                          |   |   |   | CY-408 | Polymer Technology                   | 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 |    |       | Course Code     | Course Title                        | Credit Hours |    |       |
|               |                                      | Th           | Pr | Total |                 |                                     | Th           | Pr | Total |
| HS-104        | Functional English                   | 3            | 0  | 3     | HS-115          | Academic Reading & Writing          | 3            | 0  | 3     |
| HS-105/       | Pakistan Studies/                    | 2            | 0  | 2     | HS-119/         | Islamic Studies /                   | 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            | 2            | 1  | 3     |
| HS-117        | Foundation of Education              | 3            | 0  | 3     |                 | Applications                        |              |    |       |
| HS-120        | Introduction to English Literature-I | 3            | 0  | 3     | HS-118          | Media Studies                       | 3            | 0  | 3     |
| HS-121        | Introduction to Linguistics          | 3            | 0  | 3     | HS-122          | History of English Literature-I     | 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 |    |       | Course Code     | Course Title                     | Credit Hours |    |       |
|               |                                       | Th           | Pr | Total |                 |                                  | 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 |    |       | Course Code     | Course Title              | Credit Hours |    |       |
|               |                            | Th           | Pr | Total |                 |                           | 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-xxx        | Elective-I                 | 3            | 0  | 3     | HS-320          | Human Resource Management | 3            | 0  | 3     |
| HS-xxx        | Elective-II                | 3            | 0  | 3     | HS-xxx          | Elective-III              | 3            | 0  | 3     |

## FINAL YEAR

| Fall Semester |                                 |        |    |             | Spring Semester |                              |        |    |             |
|---------------|---------------------------------|--------|----|-------------|-----------------|------------------------------|--------|----|-------------|
| Course Code   | Course Title                    | Credit |    | Hours Total | Course Code     | Course Title                 | Credit |    | Hours Total |
|               |                                 | Th     | Pr |             |                 |                              | Th     | Pr |             |
| 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           |

## Elective Courses

|        |                               |   |   |   |
|--------|-------------------------------|---|---|---|
| HS-312 | Translation Studies           | 3 | 0 | 3 |
| HS-313 | Media Discourse Analysis      | 3 | 0 | 3 |
| HS-314 | World Englishes               | 3 | 0 | 3 |
| HS-315 | Language in Education         | 3 | 0 | 3 |
| HS-316 | English for Specific Purposes | 3 | 0 | 3 |
| HS-317 | Language & Gender             | 3 | 0 | 3 |
| HS-318 | Anthropological Studies       | 3 | 0 | 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  | Th | Pr | Credit Hours Total | Course Code | Course Title                                 | Th Pr Total |
| EC-101            | Microeconomics-I  | 3  | 0  | 3                  | EC-103      | Macro Economics-I                            | 3 0 3       |
| MT-100            | Introduction to Mathematics<br>(Pre-Engg. and CComp. Sc. Students are Exempted) | NC | NC | NC                 | EC-104      | Financial Accounting                         | 3 0 3       |
| EC-102            | Principles of Accounting  | 3  | 0  | 3                  | EC-105      | Information Technology in Business Economics | 2 1 3       |
| CT-173            | Introduction to Computer Applications   | 2  | 1  | 3                  | HS-115      | Academic Reading & Writing                   | 3 0 3       |
| HS-104            | Functional English  | 3  | 0  | 3                  | EC-106      | Principles of Management                     | 3 0 3       |
| HS-105/<br>HS-127 | Pakistan Studies /<br>Pakistan Studies (For Foreigners)                         | 2  | 0  | 2                  | HSK-I       | Chinese Language                             | NC          |

#### SECOND YEAR

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

#### THIRD YEAR

| Fall Semester |                             |    |    | Spring Semester    |             |                             |             |
|---------------|-----------------------------|----|----|--------------------|-------------|-----------------------------|-------------|
| Course Code   | Course Title                | Th | Pr | Credit Hours Total | Course Code | Course Title                | 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 | 3  | 0  | 3                  | EC-309      | Financial Management        | 3 0 3       |

#### FINAL YEAR

| Fall Semester |                            |    |    | Spring Semester    |             |                                    |             |
|---------------|----------------------------|----|----|--------------------|-------------|------------------------------------|-------------|
| Course Code   | Course Title               | Th | Pr | Credit Hours Total | Course Code | Course Title                       | 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-xxx      | Elective - III (Economics)         | 3 0 3       |
| EC-403        | Applied Economics          | 2  | 1  | 3                  | EC-xxx      | Elective - IV (Finance)            | 3 0 3       |
| EC-xxx        | Elective-I (Economics)     | 3  | 0  | 3                  | EC-xxx      | Elective - V (Economics / Finance) | 3 0 3       |
| EC-xxx        | Elective-II (Finance)      | 3  | 0  | 3                  | EC-405      | Project                            | 6 0 6       |
| EC-405        | Project                    | 0  | 0  | 0                  |             |                                    |             |

#### Elective Courses

|        |   |   |   |   |
|--------|---|---|---|---|
| EC-406 | Urban Economics                         | 3 | 0 | 3 |
| EC-407 | Industrial Economics                    | 3 | 0 | 3 |
| EC-408 | Transport Economics                     | 3 | 0 | 3 |
| EC-409 | Environmental Economics                 | 3 | 0 | 3 |
| EC-410 | Labour Economics                        | 3 | 0 | 3 |
| EC-411 | International Finance                   | 3 | 0 | 3 |
| EC-412 | Corporate Finance                       | 3 | 0 | 3 |
| EC-413 | Project Appraisal & Investment Analysis | 3 | 0 | 3 |

\* 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     |                 |   |              |    |       |
| HS 104        | Functional English                    | 3            | 0  | 3     | AR 144          | Communication and Allied Skills-II          | 0            | 3  | 3     |
| MT 112        | Mathematics for Architects            | 3            | 0  | 3     | AR-151          | Construction and Materials-I                | 1            | 2  | 3     |
| PH 111        | Basic Physics for Architects          | 1            | 1  | 2     | CE 112          | Fundamental of Statics                      | 2            | 0  | 2     |
| CY 111        | Basic Chemistry for Architects        | 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 |    |       | Course Code     | Course Title                       | Credit Hours |    |       |
|               |                                     | Th           | Pr | Total |                 |                                    | Th           | 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        | Contruction and Materials-II        | 1            | 2  | 3     | AR 231          | Environmental Design & System-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 311        | History and Theory-III                       | 2            | 1  | 3     | AR 312          | History and Theory-IV              | 2            | 1  | 3     |
| AR 331        | Environmental Design & System-II             | 2            | 1  | 3     | AR 321          | Housing and Community Development  | 2            | 1  | 3     |
| AR 351        | Construction and Materials-III               | 1            | 2  | 3     | AR 342          | Communications and Allied Skills-V | 1            | 2  | 3     |
| AR 361        | Introduction to Architecture of Conservation | 2            | 1  | 3     | AR 352          | Construction and Materials-IV      | 1            | 2  | 3     |
| AR 381        | Introduction to Landscape Architecture       | 1            | 2  | 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 441        | Communication and Skills-VI     | 1            | 2  | 3     | AR 461          | Research Methodologies               | 2            | 1   | 3     |
| AR 451        | Construction & Materials-V      | 1            | 2  | 3     | AR ###          | Elective                             | 1/2          | 1/2 | 3     |

## FINAL YEAR

| Fall Semester |                                    |           |          |       | Spring Semester |                              |           |          |       |
|---------------|------------------------------------|-----------|----------|-------|-----------------|------------------------------|-----------|----------|-------|
| Course Code   | Course Title                       | Credit Th | Hours Pr | Total | Course Code     | Course Title                 | Credit Th | Hours Pr | Total |
| AR 503        | Architecture Design Project*       | 0         | 4        | 4     | AR 503          | Architectural Design Project | 2         | 8        | 10    |
| AR 521        | Comprehensive Environmental Design | 1         | 5        | 6     | AR 561          | Professional Practice        | 2         | 1        | 3     |
| AR 552        | Construction and Materials-VI      | 2         | 1        | 3     |                 |                              |           |          |       |

## Elective Courses

|        |  |   |   |   |
|--------|--|---|---|---|
| AR 472 | Documentation Techniques in Architecture | 1 | 2 | 3 |
| AR 473 | Studies in Critical Regionalism          | 2 | 1 | 3 |

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









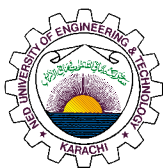
# CHAPTER 4

## *Mode of Application for Admission*



PROSPECTUS **2019**  
*Undergraduate*





#### 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:
- 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.
  - Application processing fee of Rs. 3,700/- is required to be paid in designated branches of banks.
  - Candidates may apply under more than one category through the same online admission process. Admission categories have been specified in Chapter 5.
  - 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:
- Domicile of Sindh Province
  - Secondary School Certificate and Marks Certificate
  - H.S.C. Marks Sheet or equivalent document
  - Equivalence Certificate from IBCC for foreign examinations, if applicable
  - Hafiz-e-Quran Certificate, if applicable
  - 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:-
- R-6 i.e., Resident of Rural Areas of Karachi, should submit original School Leaving Certificate.
  - 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.
  - 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)

- R-9 i.e., Outstanding Sportsmen, should submit sports testimonials as mentioned in Para R-9(iv)3 in Chapter 5.
  - 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 and should fulfill the following conditions:
- The year of passing the examination held should not be earlier than the three years immediately prior to submission of application.
  - Each applicant should have obtained at least 60% marks in aggregate.
    - Candidates having obtained at least 55% marks in aggregate are eligible to apply for admission in all BS programmes except in CS&IT.
  - For admission in any undergraduate Programme, subjects examined at the HSC level must include Pre- Engineering subjects of Mathematics, Physics and Chemistry.
    - 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 Electronic, 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 and Development Studies.

- 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 secured at least 50% marks in Education Testing Council (ETC) of HEC 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/ETC 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.**

### 4.4 DETERMINATION OF MERIT POSITION

- 4.4.1 The overall merit in respect of candidates for admission shall be determined on the basis of Merit Score (MS) to be calculated as under:

$$\text{MS} = \text{HSC Marks} + \text{Entry Test Marks}$$

HSC Marks indicate marks obtained in the qualifying examination, HSC (Pre- Engineering), HSC (Computer Science), HSC (Pre- Medical), HSC (Commerce), HSC (Arts) or Equivalent Foreign Examination as the case may be.

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

- 4.4.2 For applicants who have passed their qualifying examination in 2016 or in 2017 or in 2018 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

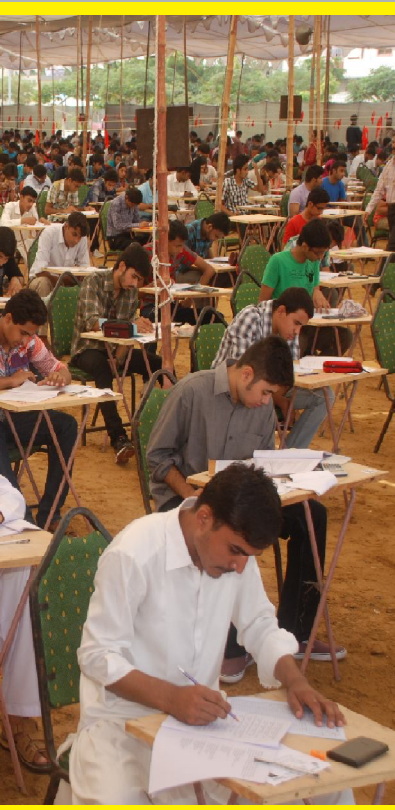
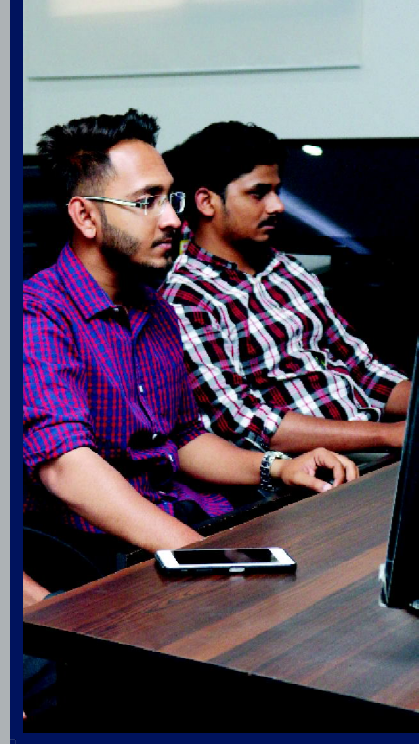
- 4.6.1 The Vice Chancellor of the University will be competent to reject any application and to cancel without assigning any reason.
- 4.6.2 The application shall be rejected summarily in case the applicant is found guilty of any suppression or misrepresentation of material facts at any stage. The Vice 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.





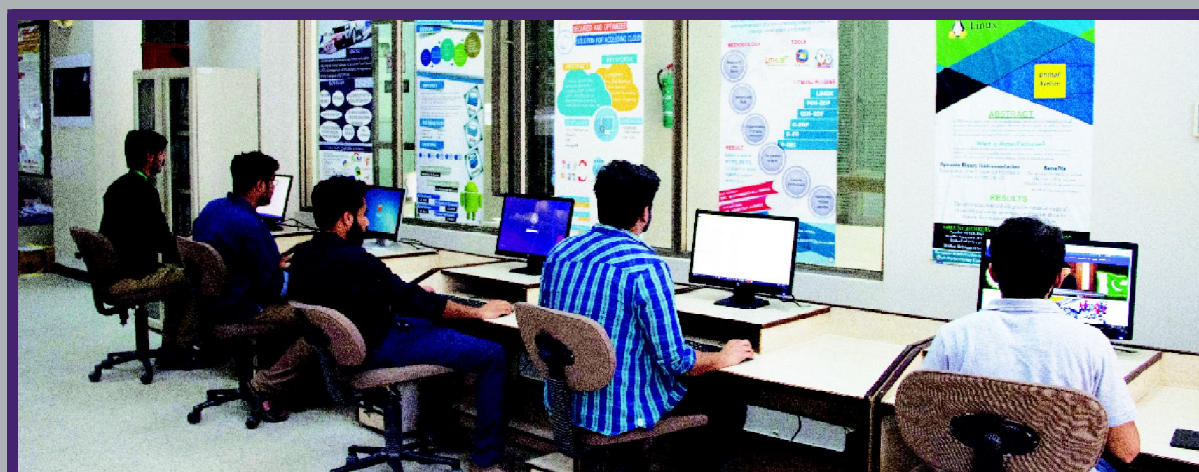
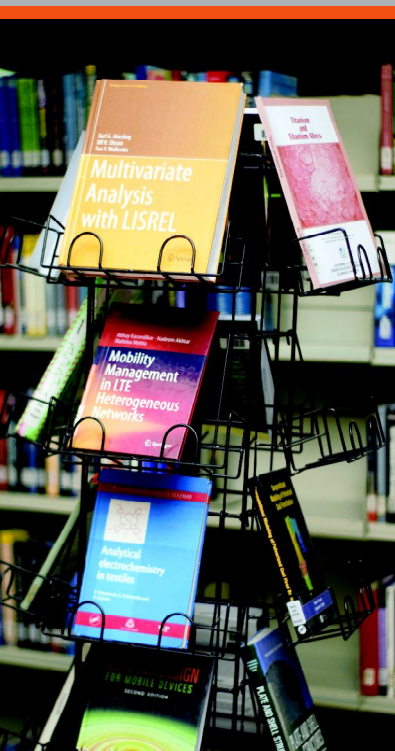


## CHAPTER 5

# Admission Category



## PROSPECTUS 2019 Undergraduate





### 5.1. REGULAR SCHEME

## Distribution of Seats

| CATEGORY<br>NO. | CE<br>(CN)  | CE | UE | PE | ME  | TE | IM | AU | EE  | TC | CS | EL | CH | MM | PP | MY | CT | SE | AR | BM | FD | MG | TS | DS | CF | IC | AP | EG | EC   | Total |
|-----------------|---|----|----|----|-----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|-------|
| R-1(a)          | HSC (Pre-Engineering/Computer Science) from Board of Intermediate Education, Karachi                        |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 1461 |       |
|                 | 103   | 25 | 43 | 28 | 132 | 47 | 72 | 34 | 125 | 55 | 88 | 93 | 43 | 38 | 37 | 33 | 33 | 55 | 20 | 37 | 22 | 38 | 53 | 5  | 50 | 51 | 50 | 8  |      | 43    |
| R-1(b)          | HSC (Pre-Medical) from Board of Intermediate Education, Karachi   |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 17   |       |
|                 | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 10 | 0  | 2  | 0  | 3  | 0  | 0  | 0  | 2  |      | 0     |
| R-1(c)          | HSC (Commerce) from Board of Intermediate Education, Karachi  |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 16   |       |
|                 | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 5  | 0  | 0  | 0  | 0  | 0  | 2  |      | 9     |
| R-1(d)          | HSC (Arts) from Board of Intermediate Education, Karachi  |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 6    |       |
|                 | 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     |
| R-2(a)          | HSC (Pre-Engineering/Computer Science/Commerce/Arts) from Board of Intermediate Education, Hyderabad        |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 34   |       |
|                 | 3   | 1  | 1  | 1  | 2   | 1  | 1  | 0  | 2   | 2  | 1  | 2  | 1  | 1  | 0  | 1  | 1  | 2  | 1  | 0  | 0  | 1  | 1  | 0  | 2  | 2  | 2  | 2  |      | 0     |
| R-2(b)          | HSC (Pre-Engineering/Computer Science/Commerce/Arts) from Board of Intermediate Education, Mirpurkhas       |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 31   |       |
|                 | 2   | 1  | 1  | 0  | 2   | 0  | 1  | 0  | 3   | 1  | 1  | 0  | 1  | 1  | 0  | 1  | 1  | 2  | 1  | 0  | 0  | 3  | 2  | 0  | 1  | 1  | 2  | 0  |      | 3     |
| R-2(c)          | HSC (Pre-Engineering/Computer Science/Commerce/Arts) from Board of Intermediate Education, Sukkur           |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 30   |       |
|                 | 2   | 1  | 1  | 0  | 2   | 0  | 1  | 0  | 2   | 1  | 1  | 1  | 1  | 0  | 0  | 1  | 1  | 2  | 1  | 0  | 0  | 3  | 2  | 1  | 1  | 1  | 1  | 0  |      | 3     |
| R-2(d)          | HSC (Pre-Engineering/Computer Science/Commerce/Arts) from Board of Intermediate Education, Larkana          |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 29   |       |
|                 | 2   | 1  | 1  | 0  | 2   | 0  | 1  | 0  | 2   | 1  | 1  | 1  | 1  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 2  | 2  | 1  | 2  | 2  | 2  | 0  |      | 1     |
| R-3(a)          | HSC (Pre-Engineering/Pre-Medical/Computer Science/Commerce/Arts) from Federal Board of Education, Islamabad |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 52   |       |
|                 | 5   | 0  | 2  | 1  | 3   | 1  | 1  | 0  | 5   | 1  | 3  | 3  | 2  | 0  | 0  | 2  | 2  | 2  | 3  | 0  | 1  | 1  | 2  | 1  | 2  | 2  | 2  | 2  |      | 1     |
| R-3(b)          | HSC (Pre-Engineering/Computer Science) from Aga Khan Board  |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 36   |       |
|                 | 2   | 0  | 2  | 0  | 3   | 1  | 3  | 1  | 1   | 1  | 1  | 1  | 2  | 0  | 1  | 1  | 1  | 1  | 2  | 0  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |      | 3     |
| R-3(c)          | HSC (Commerce/Arts) from Aga Khan Board   |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 5    |       |
|                 | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 2  | 0  | 1  | 0  | 0  | 0  | 1  |      | 1     |
| R-3(d)          | HSC (Pre-Medical) from Aga Khan Board   |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 5    |       |
|                 | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 2  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 1  |      | 0     |
| R-4(a)          | A-Level (Pre-Engineering/Computer Science) Institutions   |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 116  |       |
|                 | 2   | 2  | 3  | 3  | 10  | 4  | 5  | 1  | 8   | 3  | 6  | 4  | 4  | 2  | 3  | 1  | 1  | 11 | 4  | 3  | 3  | 2  | 5  | 5  | 6  | 5  | 6  | 2  |      | 2     |
| R-4(c)          | 12th Grade & Equivalent (Pre-Engineering/Pre-Medical/Computer Science/Commerce/Arts)                        |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 25   |       |
|                 | 1   | 0  | 2  | 1  | 1   | 1  | 1  | 0  | 1   | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 1  | 1  | 1  | 1  |      | 0     |
| R-4(d)          | A-Level (Pre-Medical)   |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 7    |       |
|                 | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 4  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 1  |      | 0     |
| R-4(e)          | A-Level (Commerce) Institutions   |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 4    |       |
|                 | 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  | 0  | 0  | 1  |      | 1     |
| R-4(f)          | A-Level (Arts) Institutions   |    |    |    |     |    |    |    |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 2    |       |
|                 | 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     |

| CATEGORY NO. | CE (CN)   | CE | UE | PE | ME | TE | IM | AU | EE | TC | CS | EL | CH | MM | PP | MY | CT | SE | AR | BM | FD | MG | TS | DS | CF | IC | AP | EG | EC | Total |
|--------------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| R-5          | HSC (Pre-Engg./Comp. Sc./Commerce) from Board other than Karachi, Aga Khan, Hyderabad, Mirpurkhas, Sukkur, Larkana, Federal & Foreign Exams | 1  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 1  | 0  | 0  | 0  | 1  | 0  | 0  | 1  | 1  | 1  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 12    |
| R-6          | Rural Areas of Karachi HSC (Pre-Engg./Computer Science/Commerce) from Board of Intermediate Education, Karachi.                             | 3  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 6     |
| R-7(a)       | Real sons/daughters of NED University Teachers  | 1  | 0  | 1  | 1  | 2  | 1  | 2  | 0  | 2  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 1  | 31    |
| R-7(b)       | Real sons/daughters of NED University Non-Teaching Staff  | 1  | 0  | 1  | 1  | 2  | 1  | 2  | 0  | 2  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 1  | 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  | 0  | 0  | 1  | 0  | 0  | 1  | 0  | 0  | 4     |
| R-10(a)      | Nominees of Dinshaw Family  | 1  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 1  | 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  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 6     |
| R-11(a)      | Nominees of UET Lahore/Taxila   | 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  | 4     |
| R-11(b)      | Nominees of UET Peshawar  | 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  | 2     |
| R-12(a)      | Nominees of Government of Balochistan   | 1  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 4     |
| R-12(b)      | Nominees of FATA  | 2  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 1  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 2  | 0  | 1  | 1  | 1  | 0  | 0  | 12    |
| R-12(c)      | Nominees of Government of Kashmir   | 2  | 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  | 4     |
| R-12(d)      | Nominees of Government 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  | 1  | 2     |
| R-12(e)      | Nominees from Federal Capital   | 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  | 1     |
| R-12(f)      | Nominees of Indian Occupied Kashmir (IOK)   | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 5     |
| R-13(a)      | Nominees of G.H.Q (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  | 9     |
| R-13(b)      | Nominees of N.H.Q (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  | 1     |

| CATEGORY NO. | CE (CN)  | CE | UE | PE | ME  | TE | IM | AU | EE  | TC | CS  | EL  | CH | MM | PP | MY | CT | SE | AR | BM | FD | MG | TS | DS | CF | IC | AP | EG | EC   | Total |  |  |
|--------------|--|----|----|----|-----|----|----|----|-----|----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|-------|--|--|
| R-13(c)      | Nominees of P.A.F (Air Force)  |    |    |    |     |    |    |    |     |    |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |       |  |  |
|              | 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  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0    | 1     |  |  |
| R-14         | Foreign Candidates of Economic Affairs Division (Ministry of Finance), Islamabad |    |    |    |     |    |    |    |     |    |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |      |       |  |  |
|              | 1  | 0  | 0  | 0  | 1   | 0  | 0  | 0  | 1   | 0  | 0   | 0   | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 1    | 6     |  |  |
| Total        | 142  | 31 | 60 | 37 | 172 | 60 | 91 | 36 | 163 | 68 | 112 | 111 | 59 | 47 | 45 | 45 | 46 | 83 | 37 | 62 | 33 | 70 | 71 | 25 | 70 | 70 | 25 | 80 | 2021 |       |  |  |

**Key for abbreviations:**

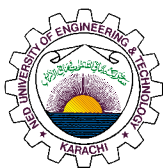
|   |   |                                 |
|---|---|---------------------------------|
| <b>CE</b> Civil Engineering                               | <b>EL</b> Electronic Engineering              | <b>AR</b> Architecture          |
| <b>UE</b> Urban Engineering                               | <b>TC</b> Telecommunications Engineering      | <b>TS</b> Textile Sciences      |
| <b>PE</b> Petroleum Engineering                           | <b>MM</b> Materials Engineering               | <b>DS</b> Development Studies   |
| <b>CN</b> Civil Engineering (Specialized in Construction) | <b>CH</b> Chemical Engineering                | <b>MG</b> Management Sciences   |
| <b>ME</b> Mechanical Engineering                          | <b>MY</b> Metallurgical Engineering           | <b>CF</b> Computational Finance |
| <b>TE</b> Textile Engineering                             | <b>PP</b> Polymer & Petrochemical Engineering | <b>IC</b> Industrial Chemistry  |
| <b>IM</b> Industrial & Manufacturing Engineering          | <b>SE</b> Software Engineering                | <b>AP</b> Applied Physics       |
| <b>AU</b> Automotive Engineering                          | <b>BM</b> Bio-Medical Engineering             | <b>EG</b> English Linguistics   |
| <b>EE</b> Electrical Engineering                          | <b>FD</b> Food Engineering                    | <b>EC</b> Economics & Finance   |
| <b>CS</b> Computer Systems Engineering                    | <b>CT</b> Computer Science                    |                                 |

- 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(d)      | Candidates having passed foreign Examination (A Level, Cambridge/ London/Oxford) equivalent to H.S.C. (Pre-Medical) Examination.   |
| R-1(b) | Candidates having passed H.S.C.(Pre-Medical) Part I & II Examinations from Board of Intermediate Education, Karachi.  | 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.  |
| R-1(c) | Candidates having passed H.S.C.(Commerce) 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(d) | Candidates having passed H.S.C.(Arts) Part I & II Examinations from Board of Intermediate Education, Karachi.   | <b>N.B:</b> | <b>The seats between sub-categories R-4(a) to R-4(f) are inter-transferable, whenever considered necessary by the University.</b>  |
| R-2(a) | Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce) Part I & II Examinations from Board of Intermediate & Secondary Education, Hyderabad.                         | R-5         | Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce) Part I & II Examinations from any Board other than Karachi, Hyderabad, Mirpurkhas, Sukkur, Larkana, Federal, Aga Khan Board and Foreign Examinations.  |
| R-2(b) | Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce) Part I & II Examinations from Board of Intermediate & Secondary Education, Mirpurkhas.                        | 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(c) | Candidates having passed HSC (Pre-Engineering/ Computer Science/Commerce/Arts) Part I & II Examinations from Board of Intermediate & Secondary Education, Sukkur.                       | R-7(a)      | Candidates – Real Sons/Real Daughters of the NED University Teachers are eligible for admission provided that:   |
| 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. | 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   |
| R-3(b) | Candidates having passed H.S.C. (Pre-Engineering/ Computer Science) Part I & II Examinations from Aga Khan Board.   | 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.   |
| 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:  |
| R-4(a) | Candidates having passed Foreign Examination (A-Level, Cambridge/ London/Oxford) equivalent to H.S.C. (Pre-Engineering/Computer Science) Examination.                                   | 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   |
| 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.                     |             |  |



- 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.

**N.B:** The seats between the sub-categories R-7(a) and R-7(b) are inter-transferable, whenever considered necessary by the University.

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 Khyber 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 Balochistan whose names are forwarded by Education Department, Government of Balochistan.

R-12(b) Nominees from Federally Administered Tribal Areas whose names are forwarded by Home & TAs Department, Government of Khyber Pakhtunkhwa, Peshawar.

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 Kashiri (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

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)



## 5.2. SELF FINANCE SCHEME

### 5.2(i) Distribution of Seats

| CATEGORY<br>NO. | CE<br>(CN)   | CE | UE | PE | ME | TE | IM | AU | EE | TC | CS | EL | CH | MM | PP | MY | CT | SE | AR | BM | FD | MG | TS | DS | CF | IC | AP | EG | EC  | Total |
|-----------------|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-------|
| SF-1(a)         | HSC (Pre-Engineering/Computer Science) from Board of Intermediate Education, Karachi   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 174 |       |
|                 | 4  | 2  | 6  | 3  | 25 | 1  | 15 | 2  | 31 | 5  | 25 | 22 | 5  | 1  | 2  | 2  | 5  | 12 | 2  | 2  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-1(b)         | HSC (Pre-Medical) from Board of Intermediate Education, Karachi  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 14  |       |
|                 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 14 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-2(a)         | HSC (Pre-Engineering/Computer Science) from Board of Intermediate Education, Hyderabad   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 15  |       |
|                 | 6  | 0  | 0  | 0  | 1  | 1  | 1  | 0  | 2  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-2(b)         | HSC (Pre-Engineering/Computer Science) from Board of Intermediate Education, Mirpurkhas  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 12  |       |
|                 | 5  | 0  | 0  | 0  | 1  | 0  | 1  | 0  | 2  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-2(c)         | HSC (Pre-Engineering/Computer Science) from Board of Intermediate Education, Sukkur  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 11  |       |
|                 | 5  | 0  | 0  | 0  | 1  | 0  | 1  | 0  | 1  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-2(d)         | HSC (Pre-Engineering/Computer Science) from Board of Intermediate Education, Larkana   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 11  |       |
|                 | 5  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 1  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-3(a)         | HSC (Pre-Engg./Computer Science) from Federal Board of Education, Islamabad from an Institute located in Pakistan              |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 13  |       |
|                 | 1  | 0  | 0  | 1  | 2  | 0  | 1  | 0  | 1  | 0  | 1  | 2  | 0  | 0  | 0  | 1  | 1  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-3(b)         | HSC (Pre-Engineering/Computer Science) from Aga Khan Board   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 12  |       |
|                 | 1  | 0  | 0  | 1  | 2  | 0  | 1  | 0  | 2  | 0  | 1  | 0  | 1  | 0  | 0  | 1  | 0  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-4(a)         | A-Level (Pre-Engineering/Computer Science) from institutions located in Pakistan   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 64  |       |
|                 | 2  | 2  | 3  | 4  | 8  | 2  | 4  | 0  | 7  | 2  | 3  | 4  | 2  | 2  | 3  | 1  | 5  | 1  | 4  | 2  | 3  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-4(b)         | 12th Grade & Equivalent (Pre-Engineering/Computer Science) from Institutions located in Pakistan                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 10  |       |
|                 | 1  | 0  | 0  | 0  | 2  | 1  | 0  | 0  | 1  | 0  | 1  | 2  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-5            | HSC (Pre-Engineering) from Board other than Karachi, Aga Khan, Hyderabad, Mirpurkhas, Sukkur, Larkana, Federal & Foreign Exams |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 3   |       |
|                 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-6(a)         | A-Level (Pre-Engineering/Computer Science) Institutions located Overseas   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 8   |       |
|                 | 1  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-6(b)         | 12th Grade & Equivalent (Pre-Engineering/Computer Science) Institutions located Overseas                                       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 3   |       |
|                 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |
| SF-6(c)         | HSC (Pre-Engineering/Computer Science) from Federal Board Islamabad located outside Pakistan                                   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 9   |       |
|                 | 1  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |     | 0     |

| CATEGORY NO. | CE (CN)  | UE | PE | ME | TE | IM | AU | EE | TC | CS | EL | CH | MM | PP | MY | CT | SE | AR | BM | FD | MG | TS | DS | CF | IC | AP | EG | EC | Total |
|--------------|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| SF-7(a)      | Foreign Candidates whose names are forwarded by Higher Education Commission, Pakistan  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 10    |
|              | 1  | 0  | 0  | 1  | 1  | 0  | 0  | 1  | 1  | 0  | 1  | 1  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |       |
| SF-7(b)      | Afghan Candidates whose names are forwarded by Higher Education Commission, Pakistan   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 6     |
|              | 3  | 0  | 1  | 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  |       |
| SF-8         | Real Sons & Daughters of NEDAN Life Members, HSC (Pre-Engineering/Computer Science)    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 10    |
|              | 1  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |       |
| SF-9(a)      | Real Sons/Daughters of Professional Engineers, HSC (Pre-Engineering)                   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 4     |
|              | 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  |       |
| SF-9(b)      | Real Sons/Daughters of Professional Architects & Planners, HSC (Pre-Engineering)       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 2     |
|              | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |       |
| SF-9(c)      | Real Sons / Daughters of Expatriate Pakistanis, HSC (Pre-Engineering/Computer Science) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 8     |
|              | 1  | 0  | 0  | 0  | 1  | 0  | 1  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |       |
| SF-10(a)     | Nominees of Dinshaw Family   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 4     |
|              | 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  |       |
| SF-10(b)     | Nominees of S.S. International   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 2     |
|              | 0  | 0  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |       |
| SF-11        | Sponsor Seats  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 140   |
|              | 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  |       |
| Total        | 85   | 4  | 10 | 13 | 88 | 10 | 29 | 4  | 97 | 12 | 39 | 39 | 31 | 3  | 5  | 5  | 14 | 19 | 13 | 18 | 7  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 545   |

**Key for abbreviations:**

|    |   |    |                                     |    |                       |
|----|---|----|-------------------------------------|----|-----------------------|
| CE | Civil Engineering                               | EL | Electronic Engineering              | AR | Architecture          |
| UE | Urban Engineering                               | TC | Telecommunications Engineering      | TS | Textile Sciences      |
| PE | Petroleum Engineering                           | MM | Materials Engineering               | DS | Development Studies   |
| CN | Civil Engineering (Specialized in Construction) | CH | Chemical Engineering                | MG | Management Sciences   |
| ME | Mechanical Engineering                          | MY | Metallurgical Engineering           | CF | Computational Finance |
| TE | Textile Engineering                             | PP | Polymer & Petrochemical Engineering | IC | Industrial Chemistry  |
| IM | Industrial & Manufacturing Engineering          | SE | Software Engineering                | AP | Applied Physics       |
| AU | Automotive Engineering                          | BM | Bio-Medical Engineering             | EG | English Linguistics   |
| EE | Electrical Engineering                          | FD | Food Engineering                    | EC | Economics & Finance   |
| CS | Computer Systems Engineering                    | CT | Computer Science                    |    |                       |

**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-1(b) Candidates having passed H.S.C.(Pre-medical) Part I & II Examinations and improvement, if any, from Board of Intermediate Education, Karachi,
- 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-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-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-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-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-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-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.
- 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-5 Candidates having passed HSC (Pre-Engineering) Part I & II Examinations from any Board other than Karachi, Aga Khan, Hyderabad, Mirpurkhas, Sukkur, Larkana, Federal Board and Foreign Examinations.

**NOTE:** Rs.730,000/ (Rupees Seven Hundred Thirty 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) except for Materials, Metallurgy, Textile, Computational Finance, Industrial Chemistry, Applied Physics, Management Sciences, Textile Science, Development Studies, English Linguistics and Architecture, the Self Finance fee will remain Rs.630,000/- (Rupees Six Hundred Thirty Thousands only).

- SF-6(a) Candidates having passed Foreign Examination (A Level, Cambridge/London/Oxford) equivalent to H.S.C. (Pre-Engineering/Computer Science).
- SF-6(b) Candidates having passed Foreign Examination (12th Grade or Others) equivalent to H.S.C. (Pre-Engineering/ Computer Science).
- SF-6(c) Candidates having passed HSC (Pre-Engineering/ Computer Science) Part I & II Examination from Federal Board of Intermediate & Secondary Education, Islamabad.
- 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-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-8 Candidates who are Real Sons / Daughters of NED University Alumni Network (NEDAN) Life Members.
- 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.
- N.B:** The candidate's real parent must have valid registration with Pakistan Engineering Council.
- 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. 930,000/- (Rupees Nine Hundred Thirty 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.

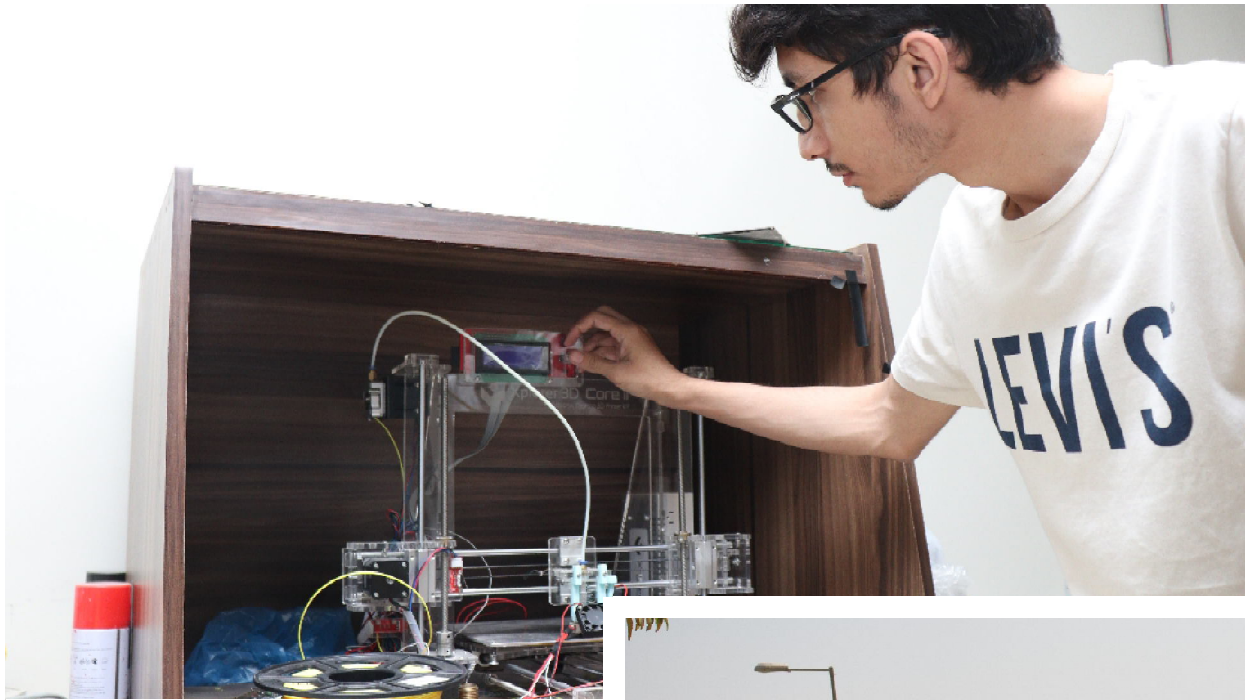
### 5.2 (iv) Transfer of Seats

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:

- All BE and BS (CS) seats to SF-1(a).
- All remaining BS and BArch seats to R-1(a)









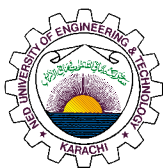


## CHAPTER 6

# Mode of Admission

PROSPECTUS **2019**  
Undergraduate





## 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.54,000/- for all Engineering programmes and BS (Computer Sciences)





- Rs. 55,500/- for candidates being admitted in Architecture Department
- Rs. 63,200/- for candidates being admitted in all remaining BS programmes. Those admitted in BS (Industrial Chemistry) shall be required to pay Rs 64,200/- (including Rs.1000/- as Bench Fee)

**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.

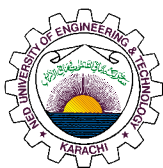
#### 6.4 MEDIUM OF INSTRUCTIONS

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. 730,000/- (Rupees Seven Hundred Thirty 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.



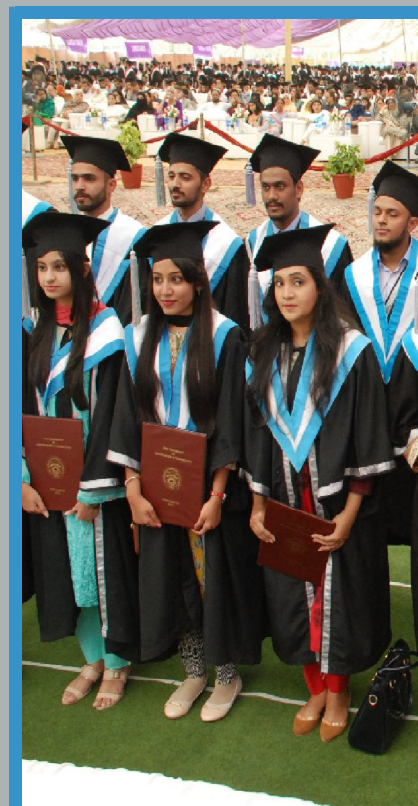






## CHAPTER 7

# *Examinations*



PROSPECTUS **2019**  
*Undergraduate*





## 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  | Good                      |
| C +   | 2.4         | 64 – 66  | Above Average             |
| C     | 2.0         | 60 – 63  | Average                   |
| C –   | 1.7         | 57 – 59  | Satisfactory              |
| D +   | 1.4         | 54 – 56  | } Adequate                |
| D     | 1.0         | 50 – 53  |                           |
| F     | 0.0         | Below 50 | Fail                      |
| P     | -           | 50 – 100 | Pass                      |
| IP    | -           | -        | Pass in non-credit course |
| X     | -           | -        | In progress*              |
| I     | -           | -        | Exempted                  |
| W     | -           | -        | Incomplete                |
| WU    | -           | -        | Withdrawal                |
|       |             |          | 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:

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

## 7.6 MARKS DISTRIBUTION

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

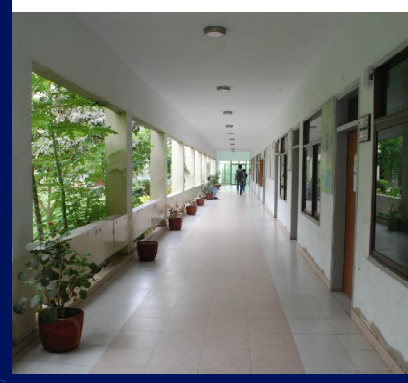
Each theory paper, practical, design course (studio work) and Final Year project shall have 60% marks for final examination and 40% marks for sessional evaluation.

## 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.

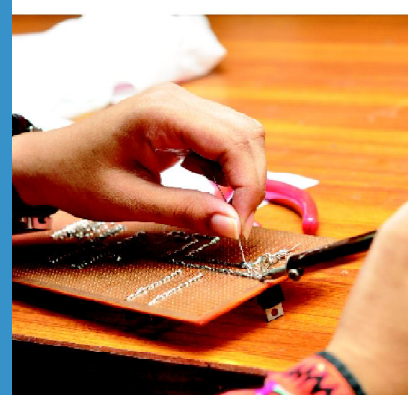






## CHAPTER 8

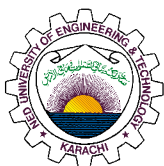
# *Fee Structure*



PROSPECTUS **2019**  
*Undergraduate*





**8.1 FEE AND CHARGES (NON-REFUNDABLE)**

- a) Admission Fee to be paid once at the time of Admission  
For Locals  
In BE, BS (CS) and B. Arch Rs. 31,000/-  
In all remaining BS Programmes Rs. 29,000/-  
For Foreigners Rs.307,950/-

- 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.18,510/-
  - For all remaining BS programmes \*Rs.29,710/-

**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.4,490/-  
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. 5,000/- (\*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. 630,000/- for admission in Materials, Metallurgy, Textile, Architecture and all BS Programmes [except BS(CS)].
  - Rs. 730,000/- for all remaining disciplines
- ii) Categories SF-6 to SF-11 Rs. 930,000/-
- 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.10,650/- 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 stationary 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



PROSPECTUS **2019**  
Undergraduate





### 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, Urban, Petroleum, Construction, 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 & Information Technology, 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.



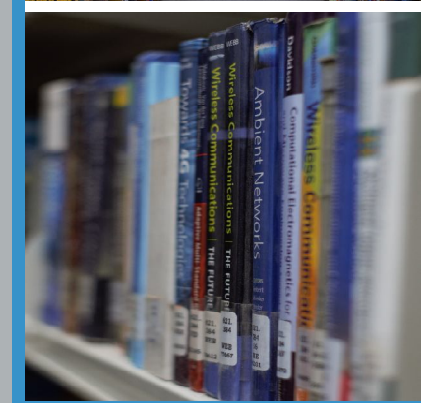




# CHAPTER 10

## *Supporting Infrastructure and Students Facilities*

PROSPECTUS **2019**  
*Undergraduate*







### 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 Fibre 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 Fibre 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 Fibre 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, AACB, 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.

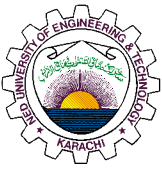
#### 10.4.2 Centre of Professional Excellence – CoPE

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 lead 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), DIEC-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:

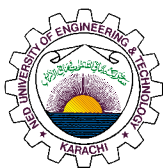
In order to maintain an environment conducive for the generation of knowledge and to provide recognition to individual inventors, encouraging the development and dissemination of useful inventions to society, ORIC has prepared drafts of University's Intellectual Property Policy and Collaborative Research 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 NEDUniversity 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, CycleYaari 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. OpenMic, is another social venture that aims at fostering the culture of public dialogue and social inclusion amongst engineers. BookCafe 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 MakerStudio. The initiative aims at creating an environment that fosters creative exploration of ideas. Inspired by MIT’s Fab Labs, MakerStudio 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 internee 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 internees 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 diagnostic & 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 Stationary 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 Intersarsity 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.

#### 10.14.8 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.



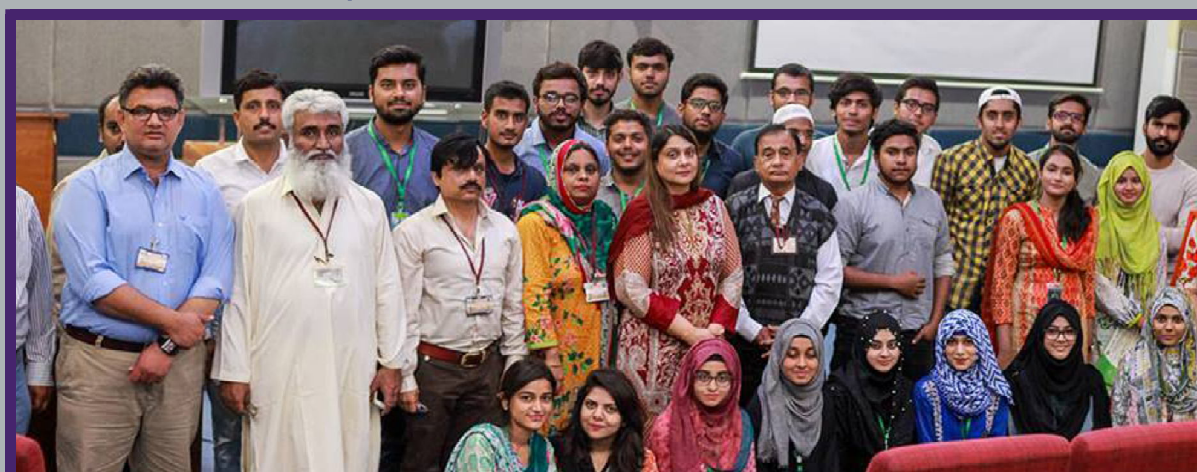
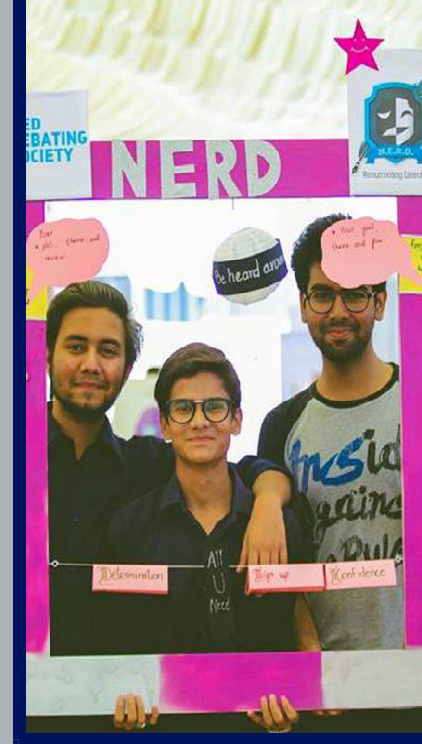




# CHAPTER 11

## *Students' Activity*

PROSPECTUS **2019**  
*Undergraduate*





### 11.1 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 through out 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)





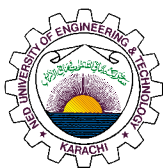


# CHAPTER 12

## *Discipline*

PROSPECTUS 2019  
*Undergraduate*





## 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 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

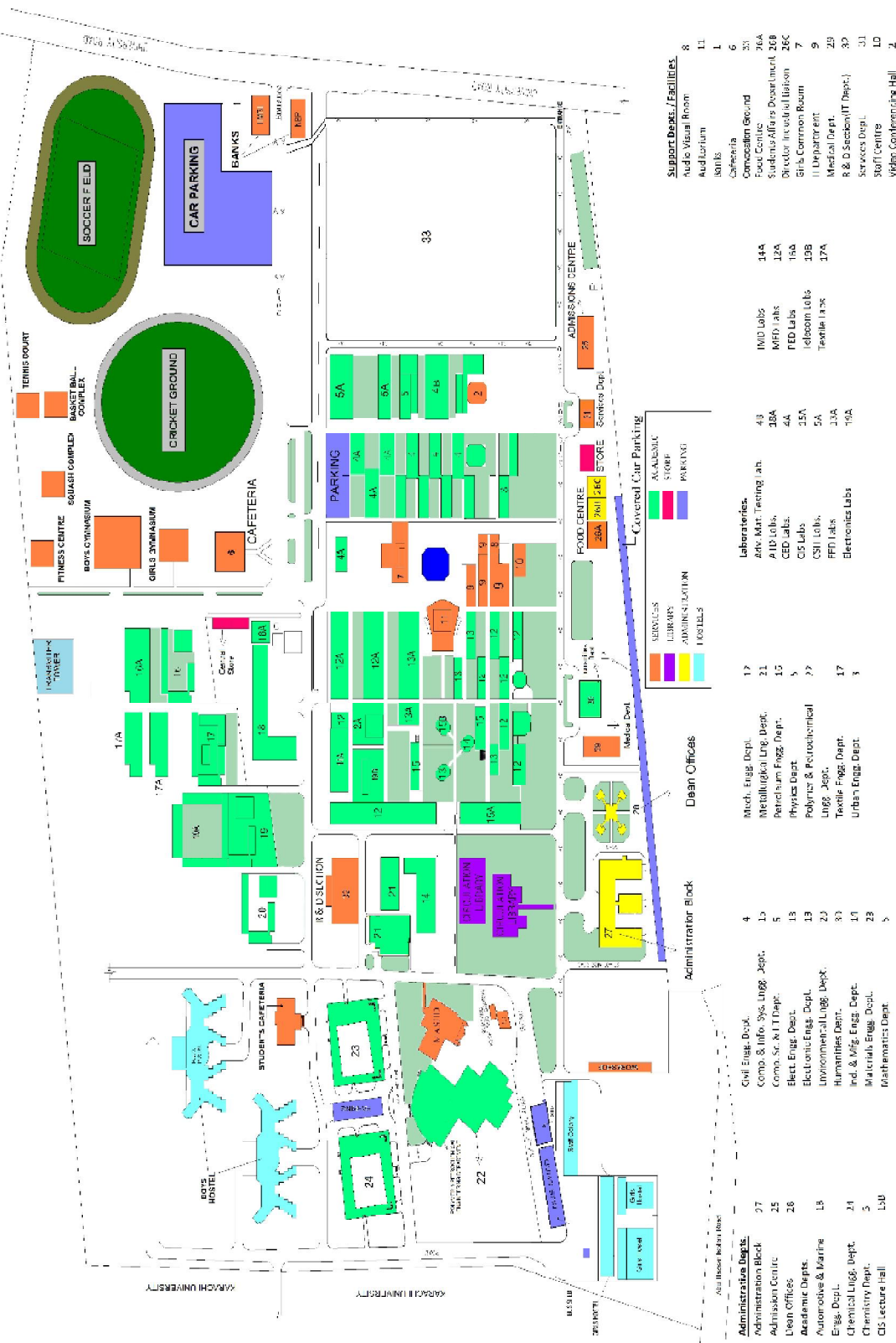
Candidates who are rusticated from the University on account of submission of forged documents at the time of their admission in this University may file appeals against such orders with the Vice Chancellor of the University within 15 days from the date of Notification alongwith a fee of Rs. 500/- (refundable 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.

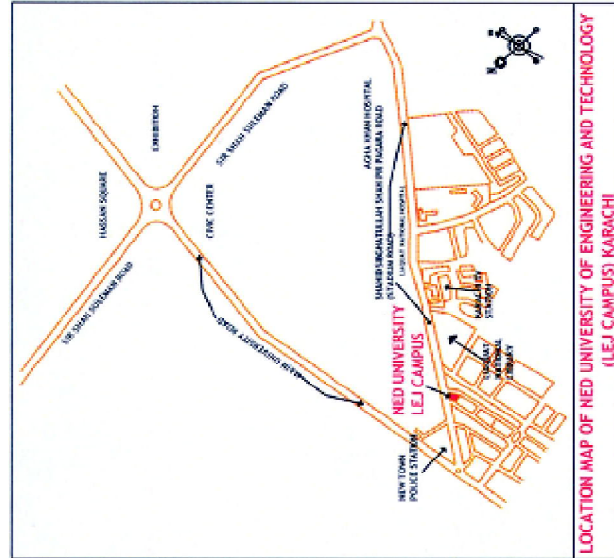


# NED UNIVERSITY OF ENGINEERING AND TECHNOLOGY

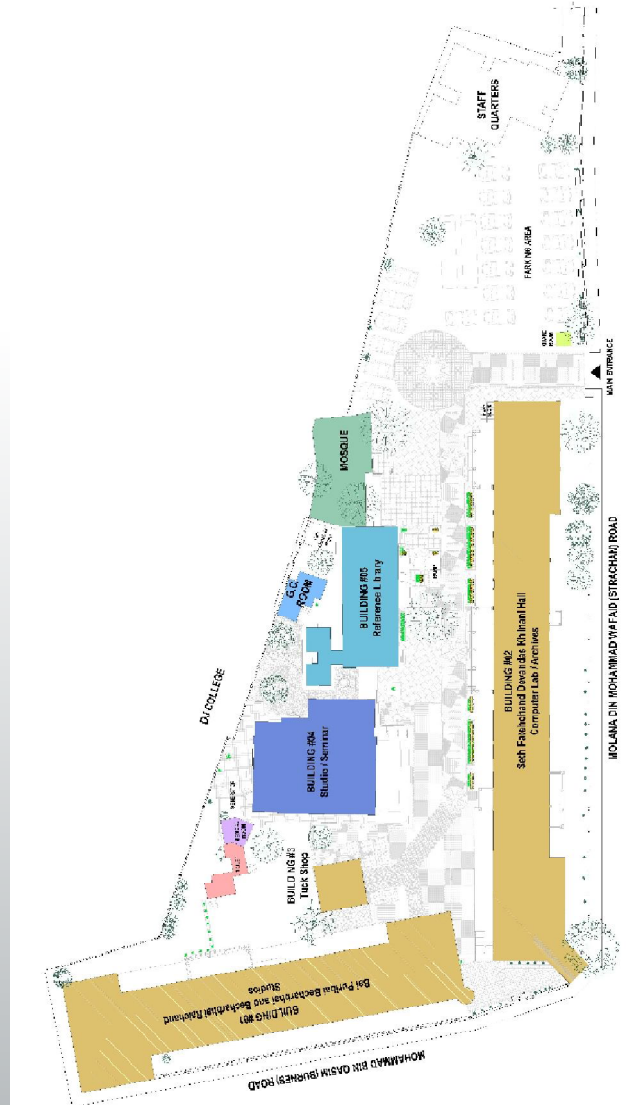




## LEJ CAMPUS

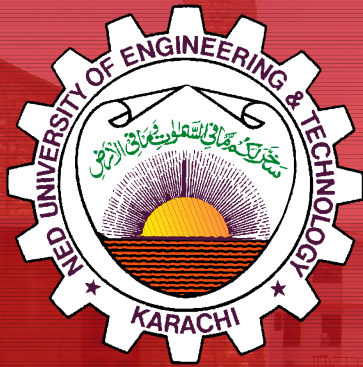


## CITY CAMPUS



## GUIDE MAP OF NED UNIVERSITY OF ENGINEERING & TECHNOLOGY (CITY CAMPUS AND LEJ CAMPUS)

**The University Authorities  
reserve the right to make any  
changes in the University  
Prospectus without any  
prior notice.**



# **NED UNIVERSITY**

of Engineering & Technology

## **ISSUED BY**

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of Engineering & Technology  
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**Fax :** +92-21-99261255

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**Tel:** 32620758, 99213058; **Fax:** 99261255

### **LEJ Campus**

81-A, Block-3, Memon Co-operative  
Housing Society, Karachi  
**Tel:** 99230601, 99230602, 99230604  
**Fax:** 99261255