5 NUMBER OF SEATS, FEES AND DEPOSIT

5(a) NUMBER OF SEATS TO BE OFFERED FOR ADMISSION TO THE PROGRAMME

Number of seats available to candidates in respective department who fulfill the requirements for eligibility as specified in the regulations shall be notified by each Department separately.

5(b) UNIVERSITY FEES AND DEPOSIT

The following are the University fees:

1- Fee Payable at the time of admission to the Programme

(i) Admission / Re-admission Fee Rs. 3500.00
(ii) Enrolment fee Rs. 1500.00
(iii) Security Deposit Rs. 5100.00
(iv) Internet Fee Rs. 600.00
(v) Documents Verification Fee Rs. 1200.00

2- Fee Payable in each semester

(i) Tuition & Examination Fee per Course

EVENING
a) M.Engg. Programme Rs. 14000.00
b) MS Programme Rs. 13000.00
c) MEM Programme Rs. 16000.00

WEEKEND
a) M.Engg. Programme Rs. 21000.00
b) MS Programme Rs. 21000.00
c) MEM Programme Rs. 25000.00

(ii) Library Fee Rs. 800.00
(iii) Registration Fee / Semester Rs. 1000.00
(iv) Late Fee, if applicable Rs. 1000.00
(v) Equivalence Fee, if applicable Rs. 800.00
6 REGULATIONS FOR THE MASTER DEGREE PROGRAMMES AS OFFERED BY NED UNIVERSITY

6.1 GENERAL

6.1.1 Title

These Regulations may be called, ‘Regulations for Master’s Degrees; NED University of Engineering & Technology’.

6.1.2 Commencement

These Regulations shall come into force with immediate effect.

6.1.3 Nature of the Degree

Successful completion of the Masters Programme shall lead to the Master’s Degree in discipline / relevant area of specialisation.

6.1.4 Nature of Programme and Number of Seats

Any teaching department of this University offering undergraduate programme may offer Day programme for full time students or Evening Programme for part time students; it may also offer both Day and Evening Programmes leading to the degree(s) as appropriate. With approval of the concerned Dean, each department shall specify number of seats in any programme and under each area of specialisation, (wherever applicable).

6.1.5 Criteria and Procedure for Admission

i) A Candidate must be a citizen of Pakistan / resident in Pakistan.

ii) The candidate should possess the following qualifications in first division or CGPA 2.4/4.0;

a) For Master of Engineering (M.Engg.)/ Master of Engineering Management (MEM) Programme, the candidate must possess Bachelors of Engineering degree or equivalent in the relevant fields.

b) For Master of Urban & Regional Planning (MURP) Programme, the candidate must possess either Bachelor of Architecture or Bachelor of City and Regional Planning or Bachelor of Civil Engg., or Bachelor of Urban Engineering or M.Sc. in Geography or four years B.S Degree in “Geography” or M.A. “Geography”.

c) For Master of Architecture (M.Arch) Programme, the candidate must possess Bachelor of Architecture.

d) For Master of Science (MS) in:-

i) Computer Science & Information Technology, the candidate must possess either Bachelors of Computer Science and Information Technology or equivalent, or Bachelor of Architecture or Bachelor of Engineering or Sixteen Years Education in Applied Mathematics or Applied Physics or equivalent.

ii) Applied Mathematics, the candidate must possess Bachelors of Engineering degree or Sixteen years education in Mathematics or equivalent.

iii) Industrial Chemistry, the candidate must possess Bachelors of Engineering degree or Sixteen years education in Chemistry or Applied Chemistry equivalent.

iv) Physics, the candidate must possess Bachelors of Engineering degree or Sixteen years education in Applied Mathematics, Applied Physics, Physics or equivalent.

v) Applied Linguistics, the candidate must possess Bachelors in English or Sixteen years education in English in the relevant area with second division and above / CGPA 2.4/4.0.

OR

e) Any other degree in disciplines as approved by Academic Council for any of the above programmes.

iii) To be enrolled in any programme Day / Afternoon/ Evening / Weekend, the candidate must have attained high degree of scholarship in his/her undergraduate study in relevant or approved discipline and must have demonstrated promise for success in advanced study.

iv) Application for admission shall be made on the prescribed form, and sent to the Chairman of concerned department, either by hand or by registered post. Any application received after the closing date may not be considered. Any applicant who fails to appear in the Admission Test shall stand disqualified for admission.

v) Admission shall be granted on the basis of merit. Merit list of successful candidates will be prepared in accordance with criteria as under:

a) Qualifying Examination Result.

b) Performance in admission test conducted by concerned department.

c) Interview of candidates or short listed candidates under (a) and (b) above, if required.

vi) Names of all selected candidates shall be displayed on the departmental notice board.

vii) Selected candidates shall be required to report to the Chairman, of the respective Department for verification of their documents, then payment of prescribed fees and complete registration / enrolment documents within the
prescribed date as notified.

viii) The Dean of each Faculty shall monitor compliance with Regulations by the concerned departments within his/her Faculty.

ix) The Vice-Chancellor can cancel admission of any candidate after giving him a personal hearing.

6.1.6 Medium of Instruction

Instructions in all classes and laboratories and all examinations written or oral shall be carried out in the English language.

6.2 SCHEME OF STUDIES

6.2.1 General

i) Each Programme shall be of thirty (30) credit hours including Dissertation and Independent Study Project where total credits hours for course work are proportionally reduced.

a) In MS (Applied Linguistics) Programme a student may earn the degree either by completing 24 credits in taught courses and 6 credits through Independent Study Project (ISP), or by completing 21 credits in taught courses and 9 credits in dissertation / thesis.

ii) There shall be two semesters in one calendar year, namely; Spring Semester and Fall Semester.

iii) Wherever applicable and in order of merit of selection, each candidate shall have the option to enrol either in the Day programme or in the Evening programme.

iv) Any student enrolled in the Day / Afternoon / Weekend programme may complete all requirements in three semesters (four semesters for students opting for dissertation) or within a maximum of six semesters (Three Years) including withdrawal, if any.

v) Any student enrolled in the Evening programme may complete all requirements in five semesters or within maximum of ten semesters (Five Years) including withdrawal (Semester and Programme withdrawal); if any.

vi) Students may, however, also be allowed by the Chairman to register for dissertation which shall be based on an analytical and/or experimental work. The dissertation shall be administered as follows:

a) The dissertation shall be equivalent to nine credit hours and shall be required to be completed within duration of two semesters.

b) The requisite work for dissertation has to be carried out in the ‘day time’.

c) Details regarding Research Work for Dissertation are as described in Clause 6.4.

d) Students undertaking dissertation shall not be allowed to take Independent Study Project.

vii) In special cases a student may be registered for Independent Study Project (ISP) which shall be administered as follows:

a) Independent Study Project shall be equivalent to six credit hours and shall be required to be completed within duration of two semesters, with three credits hours enrolled in each of the two semesters. Three credits of ISP may include laboratory work.

b) Each such student will also be assigned a Supervisor for guidance.

c) Depending on the nature of topic for Independent Study Project, Chairman concerned shall recommend a Supervisor having relevant experience /expertise in the area of the topic, to guide the student in the enquiry, analysis and/or development work undertaken and its write up throughout the period of independent study. The approval of the supervisor shall be given by the Vice Chancellor.

d) Independent Study Project shall be allowed only to those students having completed twelve credit hours with CGPA of 2.75.

e) Supervisor may recommend a Co-Supervisor to the Chairman concerned. The approval of the Co-Supervisor will be given by the Vice Chancellor.

f) A student undertaking an Independent Study Project shall be allowed to enroll in a maximum of two more courses of three credit hours each during such semester(s) in which he/she enrolls for Independent Study Project, provided that he / she is able to maintain a CGPA of 2.75 at time of such enrollment.

g) Satisfactory performance of the first three credit hours of an Independent Study Project shall be based on an Evaluation Report by the Supervisor endorsed by the Chairman concerned.

h) A student satisfactorily completing the first three credit hours of an Independent Study Project shall be allowed to enroll in the remaining three credits in a subsequent semester provided that he / she is able to maintain a CGPA of 2.75 at the time of such enrollment.

i) A student having unsatisfactorily performing in the first three credit hours of an Independent Study Project shall not be given any ISP credit and shall be required to undertake regular coursework in lieu of the six credit hours of ISP work.

j) A student after successfully completing three
Credit hours of Independent Study Project may opt / be given the option to enroll for regular coursework in lieu of the complete six credit hours of ISP work. No credit, however, shall be given in such a case for any completed ISP credit hours.

### 6.2.2 Duration of Course and Time Schedule

i) Each semester shall have at least sixteen weeks instruction time followed by semester examinations.

ii) In the Day programme, courses up to maximum of twelve credit hours and in the Evening programme courses up to maximum of six credit hours shall be allowed in each semester. However, the Chairman of the concerned department may allow one additional course to any such student who is enrolling for three credit hours of Independent Study Project in a Semester or otherwise might require one more semester to complete thirty credit hours requirement for the degree.

### 6.2.3 Admission in Any Semester

i) Admission in any semester requires registration either in any course(s) or dissertation or Independent Study Project.

ii) Registration in course(s) for earning credit hours shall be subject to the following conditions:
   a) Any student having lesser than 2.5 GPA/GCPA shall be allowed registration in courses for earning credits subject to the condition that he/she shall remain on probation during next Semester.
   b) The student shall be required to achieve at least 2.5 CGPA after completion of the course(s) during next / probationary Semester.
   c) Any student who was on probation in any Semester and had not achieved at least 2.5 CGPA shall not be allowed to earn new credits and would be required to repeat /improve earlier courses.

iii) a) A student whose CGPA is less than 2.5, if desires, shall be allowed to register in new course(s) for earning cred it.
    b) Such student shall be on probation and must achieve at least 2.5 CGPA on completion of the semester.
    c) Failing to achieve at least 2.5 CGPA, she/he shall be allowed to register in course(s) only for the improvement of CGPA.

iv) Any student may be allowed to take one course of three credit hours offered under any other area of specialisation in the same Department or in any other Department of the University with the recommendation of concerned Chairman/Chairs of the Department and approval of the concerned Dean.

v) Registration of students in any course may be subjected to the maximum number of students in the class.

vi) Any student may be allowed to change a course within two weeks after the date of the commencement of the classes by the Chairman of the concerned department.

### 6.2.4 Transfer of Credits / Exemption

Transfer of credit/ exemption of courses(s) may be granted by the concerned Chairman against courses(s) which the student has passed earlier provided that:

i) Application must be submitted before the completion of first semester of studies.

ii) Discontinuation of his/her studies has not exceeded two calendar years.

iii) Such course(s) was (were) not counted towards any other degree.

iv) Transfer of Credits

Any credit course(s) completed during preceding four semesters from this University with at least ‘B’ grade may be credited with transfer of grade(s) as follows;

a) Course(s) listed under the current scheme of specialisation

b) One course from any other specialisation in line with clause 6.2.3(iv), if applicable.

v) Exemption of Courses

Subject to equivalence, exemption may be granted:

a) To a maximum of Six credit hours equivalent courses passed in at least ‘B’ grade from any other institution.

b) Any number of non-credit courses from any other institution

Grades of exempted course(s) shall not be counted towards CGPA and the thirty credit hours requirement for the degree shall be reduced accordingly.

**Note:** Necessary notification towards grant of transfer of credits /exemption shall be issued in each case.

### 6.2.5 Cancellation of Admission

The admission of any such student will be cancelled if the student is:

i) involved in any breach of discipline as prescribed in Regulations.

ii) fails to register in any semester without being officially allowed withdrawal either from the Semester or from the Programme.

iii) On probation in second semester of his/her studies and on completion of the semester fails to achieve at least 2.5 CGPA.
6.2.6 Withdrawal from Semester

Permission to withdraw from any semester may be given under exceptional circumstances by concerned Chairman and shall be notified accordingly. However, fees paid shall not be refunded. In any case withdrawal shall only be allowed after successful completion of first semester.

6.2.7 Withdrawal from Programme

A student, who is unable to continue his/her studies because of unavoidable circumstances on his/her part and desires withdrawal from the Programme, should apply to the Chairman of the concerned department. If allowed, necessary notification shall be issued. In any case withdrawal shall only be allowed after successful completion of first semester.

6.2.8 Re-Admission in the Programme

A student who has officially withdrawn from the Programme may be readmitted in the programme provided that the period of absence together with period of study shall not exceed maximum permissible period as given in Clause 6.2.1 (iv & v).

6.2.9 Admission to Masters Programme through Academy

i) Applicants having passed Masters Courses through Academy of this University may be considered for admission in any relevant Masters Programme provided that they fulfil conditions under Clause 6.1.5 of these Regulations.

ii) Relevant courses completed in the four preceding semesters with at least ‘B’ grade may be credited towards CGPA. However, maximum of four such courses shall be credited.

iii) Consequently maximum period for completion of the Masters Degree Programme may be reduced by one Semester for day Programme and two Semesters for evening Programme.

6.3 EXAMINATION

6.3.1 Conduct of Examination

i) There shall be a final examination at the end of each semester as scheduled by the Controller of Examinations.

ii) The maximum marks in each course shall be 100; distributed as 40 marks for the sessional work and 60 marks for the final examination.

iii) The maximum marks in planning and design studio courses shall be 100; distributed as 60 marks for sessional work and 40 marks for final examination.

iv) After completion of the Semester, Independent Study Project (ISP) Report should be submitted by such candidate within two weeks for evaluation/examination. Otherwise, either the candidate may request the Chairperson for award of grade ‘I’ and extension of one Semester or withdrawal from the ISP.

a) Project shall be graded as ‘S’ for satisfactory completion of work whereas ‘U’ for unsatisfactory work in which case the Examiners Committee shall suggest more work to the student.

vi) Dissertation shall be evaluated according to procedure described in Clause 6.4.3.

6.3.2 Class Attendance

The students shall be expected to attend the classes regularly and submit the home-assignment when due. A candidate with less than 75 percent attendance in any course shall not be allowed to take the final examination in that course.

6.3.3 Grade Point Average

The following grades / grade points with the equivalent marks shall be awarded to the students on the basis of their performance in each course of study.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Point</th>
<th>Marks</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td>88 – 100</td>
<td>-</td>
</tr>
<tr>
<td>A–</td>
<td>3.7</td>
<td>80 – 87</td>
<td>-</td>
</tr>
<tr>
<td>B+</td>
<td>3.4</td>
<td>75 – 79</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
<td>70 – 74</td>
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<td>B–</td>
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<td>D+</td>
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<td>54 – 56</td>
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<tr>
<td>D</td>
<td>1.0</td>
<td>50 – 53</td>
<td>-</td>
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<tr>
<td>F</td>
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<td>Fail</td>
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<tr>
<td>S</td>
<td>-</td>
<td>-</td>
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<tr>
<td>U</td>
<td>-</td>
<td>-</td>
<td>Unsatisfactory (for dissertation)</td>
</tr>
<tr>
<td>P</td>
<td>-</td>
<td>50 – 100</td>
<td>Pass in non-credit course</td>
</tr>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>Exempted</td>
</tr>
<tr>
<td>I</td>
<td>-</td>
<td>-</td>
<td>Incomplete</td>
</tr>
<tr>
<td>WU</td>
<td>-</td>
<td>-</td>
<td>unofficial withdrawal</td>
</tr>
</tbody>
</table>

6.3.4 Academic Performance

Academic performance shall be determined on the basis of;

i) Grade point average (GPA) to be calculated for
the courses completed in any semester or for some selected courses completed in more than one semester.

ii) Cumulative Grade point average (CGPA) to be calculated for all courses completed up to any semester or on completion of thirty credit hours.

iii) GPA and CGPA shall be calculated as:

6.3.5 Absence from Examination

i) Any candidate, who fails to appear in the final examination of any course shall be awarded grade ‘WU’ in the course(s):

ii) a) If there is any documentary evidence or otherwise there is sufficient ground to justify absence of the candidate accepted as such by the teacher, the chairperson and the dean concerned, the grade WU in the course will be changed to grade ‘I’.

b) Such candidate shall be required to appear in the examination of the course as scheduled by the chairperson; if the candidates fail to appear again, for any reason, he/she shall be awarded grade WU as final grade in the course.

6.3.6 Change of Grade/ Improvement

Registration in a course for change of grade/improvement will be subject to the following conditions:

i) A compulsory course which the student is required to repeat for obtaining a passing grade or a course selected by the student for improvement of his/her CGPA.

ii) Any other credit course in lieu of an optional course.

iii) Better grade(s), if any, will be considered for determining GPA / CGPA

6.4 DISSERTATION

A student may be registered for dissertation, as prescribed in Clause 6.2.1(vi), only after having completed eighteen credit hour courses with at least 3.0 CGPA. Such student may however, be allowed to register in remaining course along with the research work.

6.4.1 Research Assignment and Supervision

i) A student will be assigned Supervisor(s) who should posses Ph.D. Degree except for Bio-Medical Engineering, professionals with fellowship in areas of specialisation may also be considered as Supervisor. The Supervisor(s) shall be recommended by Board of Studies. The approval of the supervisor shall be given by the Vice Chancellor.

ii) The Supervisor shall be responsible for;

a) initial definition/selection of the topic of the research and plan of the research assigned to the candidate.

b) guiding the candidate in development of the research proposal, overall monitoring and guidance, dissertation writing and other matters related to the programme.

iii) The research proposal for dissertation is to be evaluated by a Postgraduate Research Committee comprising of three senior faculty members including Chairman. This Committee is to be constituted by concerned Dean for evaluation of the proposal whenever submitted.

iv) The proposal is then submitted to the Board of Studies for approval.

v) The Supervisor shall regularly monitor the progress of the candidate.

vi) The candidate shall be required to present his/her work at one seminar during the period of research.

vii) The research work shall be carried out within the University. Some part of such work may be carried out in some other institution with the approval of concerned Dean.

6.4.2 Attendance and Monitoring

i) Each candidate shall be expected to attend the University regularly and submit to the Supervisor “Quarterly Progress Reports (QPR)”. This report has to be submitted to Postgraduate Research Committee through the Supervisor.

ii) Any student who is unable to perform satisfactorily in dissertation as reflected in QPR may be allowed by concerned Dean on the recommendations of supervisor and chairman to complete remaining credit hours by course work provided that the maximum time period shall remain as is given in Para 6.2.1 (iv & v)..

iii) Any candidate failing to attend the University regularly/ or not showing sufficient progress may not be allowed to continue enrolment in the programme.

iv) A candidate, who is temporarily unable to continue research because of unavoidable circumstances, should file an application to the Chairman of the concerned Department through the Supervisor for temporary suspension from the programme. Such leave of absence shall not exceed twelve months.

v) On return after availing the leave, Chairman on the recommendation of Supervisor may allow the student to continue.

vi) The maximum duration for completion of Masters Degree with dissertation may be extended for up to twelve months on recommendations of Supervisor.

6.4.3 Evaluation of Dissertation

i) A candidate may be allowed by the Chairman of the concerned Department to submit the dissertation only after:
a) Fulfilling all requirements as suggested by the Postgraduate Research Committee Studies.
b) Pursuing research work for at least twelve months.
c) Presenting the research work in a satisfactory manner;
d) Fulfilling all other regulatory requirements prescribed by the University.

ii) A candidate shall submit an application after fulfilling conditions of Section 6.4.3(i), to the Chairman of the concerned Department for the examination and shall submit three copies of the dissertation for evaluation.

iii) The candidate shall be examined orally and will be provided an opportunity to defend his/her dissertation.

iv) The Vice Chancellor of the University, on the recommendation of the Board of Studies (BoS), shall nominate an Examiner’s Committee comprising of at least three examiners including the Supervisor. Examiner may be from outside the University.

v) The result of final dissertation shall be declared in the following manner:
   a) Requirement fulfilled without any corrections
   b) Requirement fulfilled with corrections
   c) Fail

vi) The Examiner’s Committee shall examine and grade the dissertation: ‘S’ for satisfactory without any corrections or with corrections; otherwise ‘U’ for unsatisfactory.

vii) In case of result as 6.4.3(vi), one of the member of the Examiner’s Committee, as nominated by the Examiner’s Committee, shall certify that the corrections are carried out as recommended by the Examiner’s Committee.

viii) In the case of a failure, the Examiners’ Committee shall indicate in what respect the material of the dissertation should be modified and specify period for re-submission. Committee shall also decide whether to hold subsequent examination or not.

ix) The Examiner’s Committee shall submit the result of the entire examination immediately after the oral examination and submit the result on the prescribed form to the Controller of Examinations.

6.4.4 Submission of Dissertation

i) A candidate, having qualified for Masters Degree, shall submit three copies of the dissertation on a prescribed format to the Chairman of the concerned Department.

ii) The NED University of Engineering & Technology shall have the right to publish the dissertation or any part thereof – irrespective of whether or not the research work is completed.

6.5 AWARD OF DEGREE

Any student who has fulfilled following conditions shall be eligible for the award of Masters Degree in the relevant field:

i) Passed all non-credit courses, if required.

ii) Passed all credit courses counted towards degree with minimum 2.75 CGPA within specified time.

a) Satisfactorily completed Dissertation/Independent Study Project.

iii) Satisfactorily completed all other requirements

6.6 GENERAL PROVISION

Regulations and rules of the Undergraduate Programme shall not be applicable to any Postgraduate Programme unless otherwise specified by the appropriate authority.
7.1 ENGR. ABUL KALAM LIBRARY

From its humble beginning in 1922 in a room in the City Campus, the library has grown to become one of Pakistan’s leading academic libraries particularly focusing the engineering sciences and technology. The NED University 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.

The library 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 previous issues of journals.
- Government documents & Archive material including Acts and Ordinances, Services Rules, Statistical reports, Census report, Survey report, Planning reports and Budgets etc.
- Audio Visual content, CD-ROMs, DVDs etc.
- Digital content including E-Books and Journals.

Department libraries have also been set up in the two remote campuses, City Campus and LEJ Campus as well as in the main campus. A library at the NED Academy has also been established for students registered at the CCEE and CMPP. The library keeping pace with new technologies has its own Computerised Library Management Systems, Website, OPAC and Portal Services.

The Library has recently established a computer facility comprising 65 latest configuration computers. This section is dedicated to providing digital services to its users such as access to E-Books and E-Journals through the National Digital Library Programme of HEC.

The library is committed to providing 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.

7.2 INFORMATION TECHNOLOGY 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 I.T. infrastructure of the University by providing robust Internet facility to its users within and outside of its campuses. The department is equipped with state of the art networking equipment and acts as a central IT hub providing services like Internet, Portal, Web, Network Operations and Support Services. Continuing the expedition in producing the best in the Country, this Department also hosts corporate training for faculty and staff along with the video conferencing facility enabling Faculty and Students to join the rest of the Engineering and Technological hubs of the world.

7.2.1. Network & Communication 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 Highend 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 48 Mbps on PERN-2 (Pakistan Education and Research Network-2) in addition to a 1 Mbps Satellite connection. Coping up with the ever growing technology standards, the University has extended its services and infrastructure highlighted as under:-

- 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 University irrespective of their campus location.
- Deployment of customized WLAN (Wi-Fi) thus establishing Wireless Internet Network providing campus wide coverage. Deployment of Kaspersky Antivirus solution with central management at University Level.
• Deployment of Microsoft KMS server for the biggest Microsoft volume based license software installation.
• The 24 X 7 network and support services throughout the year providing access to database and information Agencies linkage with libraries (globally), Industry, Universities (local & Foreign), resource sharing and email services.

7.2.2. Hardware Maintenance and Inventory

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

7.2.3. 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 International 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.

7.2.4. 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 and Academic Performance Monitoring System etc. while several others are in the phase of development. 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.

IT department has also developed online subse quent semester registration application for admitted undergraduate students.

7.2.5. Research & Development Section

The Research & Development Section of IT Department working with main objective of providing a centralized high performance parallel computing facility to the entire University in particular and to the universities of Pakistan in general, for Research and Development in any of the Engineering disciplines. The facilities are primarily meant to be utilized at the postgraduate and PhD level. It has, therefore, been facilitated with the most advanced hardware and software keeping in view the Research and Development needs of the country in virtually all the engineering disciplines. High-end workstations with excellent graphics support and computational power are available for the researchers to assist them in their research work.

The University has the distinction of being the first Public Sector University of configuring and developing its own Linux based 50 nodes cluster with the technical assistance of its own IT force. The system was developed in the year 2003 and became functional in 2004. The State-of-the-art hardware that includes Intel Xeon processors, Gigabit Ethernet connectivity, high-tech system as well as management software has been used for Cluster development that provides tremendous
increase in performance and throughput. The System is capable of executing complex engineering problems efficiently and with great accuracy. This facility has enabled researchers and creative professionals to exploit heavy computational and bandwidth-conscious software like Fluent, Ansys, MATLAB, Cadence, OPNET etc., and perform heavy simulations and modelling exercises with ease. Recently, one new high performance computing cluster based on 64-bit architecture has been developed. The latest core processors technologies with branded high tech systems are procured. This cluster is now fully functional. With storage capacity of these systems reaching terabyte (TB) and memory capacity in gigabyte (GB), the computation on these are producing fast results. All facilities available at the Centre can be accessed on campus over the University LAN and it can also be accessed from remote locations. The centre also extends its service to the engineering industry and other professional organizations involved in Research and Development work.

The section also has a very large database of multidisciplinary software with a high number of licenses for some distinct software. Several of these software have the feature of executing tasks in parallel and utilising computing power of our clusters. The software repository will attract the research to pursue their academic research using these software under the terms and conditions of NED University. In addition, Research and Development section also has a training facility where seminars and workshops related to different software are conducted throughout the year for the faculty and students of the University.

7.3 INSTRUMENTATION CENTRE

A state of the art Instrumentation Centre established under the grant provided by the Higher Education Commission (H.E.C) is in operation, and performing testing and calibration activities for in-house purposes, besides doing repair work and maintenance for departments all over the University. It is also providing training and practical works to undergraduate and postgraduate students, and aiding the undergraduate students in undertaking final year projects of various disciplines.

The Centre has well equipped facilities, latest equipment, machinery, device and expertise for doing both inside as well as outside calibration activities. Laboratories at the centre comprise of Electronic and Signals lab, Pressure and Temperature lab, Equipment testing, Water Quality testing, Frequency flow, Training facility (for training of personnel and students of undergraduate as well as postgraduate and conduct of courses related to maintenance, calibration & testing) and National Instrument (NI). Various pressure calibrators, temperature calibrators, electrical / electronic calibrators, calibration management software (CALMAN), calibration test benches and systems like NAGMAN 9600 exist and are in regular use. The equipment is also being used for research work and providing R&D facilities for the local industry / institutions. The Centre currently is in the process of acquiring ISO 17025 certification, and up on accreditation, it will very soon be at par with the international and worldwide standards. On commissioning, the Instrumentation Centre will also provide testing of equipment used in industries and organizations located in the Karachi region as well as surroundings. It will also serve as training centre for instrument engineers. The NED University lays emphasis on efforts in contribution towards research and quality of its human resource by providing updated as well as good facilities for utilization by the student, academicians and researchers. For the achievement of all of the above objectives and goals, the Instrumentation Centre can act as a liaison between the University and Industries as well as R&D Institutions by providing quality and up to date services and facilities.

7.4 NED ACADEMY

7.4.1. General

Centre for Continuing Engineering Education was initially established in 1998. Later on the NED Academy came into existence on 1st July, 2008 as recommended by the Higher Education Commission (HEC). The main objectives of NED Academy are:

- To update Engineers with recent developments in Engineering Science / Engineering Management / IT.
- To provide opportunities for working Engineers to enhance their skills with the objective of improving their employability.
To provide opportunities for the lower tier in Engineering / IT Profession to improve their qualification to meet Professional Body’s registration level.

To offer structured programmes in conventional disciplines for engineers who are unable to find time to seek admission in formal Masters Degree programme but can acquire necessary credit hours over longer periods by attending several such programmes in service.

To offer postgraduate diplomas in specific technologies such as sugar, plastics, rubber, cement etc., which could subsequently be improved and structured to the level of postgraduate degrees.

The Academy consists of two sections:

- Centre for Continuing Engineering Education (CCEE)
- Centre for Multidisciplinary Postgraduate Programmes (CMPP)

7.4.2. Centre for Continuing Engineering Education (CCEE)

The CCEE brings University and Industry together with successful models of Industry-University partnerships. Continuing Education transfers know-how in a timely manner and to the right people. The CCEE, since its inception has offered numerous courses which are widely welcomed by the Engineering community.

7.4.3. Centre for Multidisciplinary Postgraduate Programmes (CMPP):

CMPP is planning to start Multidisciplinary M.Engg Programmes in Alternate Energy, Mechatronics and Earthquake Engineering in near future.

7.4.4. Admission to Masters Programme Through Academy:

Applicants having passed Master Courses through Academy of this University may be considered for admission in any relevant Master Programme provided that they fulfill the eligibility requirements and apply for admission in Masters Programme whenever offered. Further details are available in Master’s Regulations.

FERROCEMENT INTERNATIONAL NETWORK

Department of Civil Engineering also has the honour of being the country’s Information Node on FERROCEMENT. Ferrocement International Network (FIN-PAKISTAN) was established in the Department through International funding in 1990, and since then has been serving as National Node for disbursing research material, disseminating related knowledge and imparting know-how in ferro-cement. The National node working under INTERNATIONAL NODE at IFIC-AIT-BANGKOK, has access related to the research endeavors in Ferro cement, and has links with researchers, and resource persons in this field.

COWASJEE EARTHQUAKE STUDY CENTRE

The Department of Civil Engineering established Cowasjee Earthquake Study Centre (CESND) in year 2001 after the devastating Bhuj earthquake. The objectives of this endeavour include housing national and global data pertaining to earthquake and act as a centre for disseminating accumulated knowledge, as well to respond to emergency needs and be able to provide guiding principles for pre and post earthquake mitigation. The CESND became the hub of earthquake related endeavours soon after its establishment including publication of a newsletter. The vital role played by CESND after 8th October 2005 Kashmir earthquake led to its recognition as one of the two earthquake study centres in the Country and is being funded by HEC for its future development as an International Centre.

SHAKE TABLE

A shaking table is one of the most recent technological updating of the Civil Engineering Department at NED University. The table installed in 3mx3m in dimensions with a 500 kN actuator and a stroke capacity of ± 12 inches. This is a device for shaking structural models or building components with a wide range of simulated ground motions, including reproductions of recorded earthquakes time histories. While modern tables typically consist of a rectangular platform that is
driven in up to six degrees of freedom (DOF) by servo-hydraulic or other types of actuators, the earliest reported uses of shake tables date back more than a century. Test specimens are fixed to the platform and shaken, often to the point of failure. Using video records and data from tansducers, it is possible to interpret the dynamic behavior of the specimen. Earthquake shaking tables are used extensively in seismic research, as they provide the means to excite structures in such a way that they are subjected to conditions representative of true earthquake ground motions. The unit installed at NED University utilizes quality components and micro-clean filtration to provide trouble-free long life with minimum maintenance. A complete system of interlocks and controls allow failsafe, unattended, continuous operation.

7.8 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 are being examined.

7.9 PRODUCT DEVELOPMENT CENTRE

With the emerging new technologies and shorter product life cycle with high quality demand, the manufacturing industry in Pakistan stands at a position where they are expecting tough challenges ahead. Higher educational institutions in Pakistan are there to share these challenges NED University has been facilitated with Product Development Centre (PDC). This centre is fully equipped with complete range of sophisticated equipment and software to be used for re-engineering.

7.10 DIRECTORATE OF INDUSTRIAL LIAISON

The Directorate of Industrial Liaison was established at NED University in 1997. It has been able to create and enhance the required university-industry linkage in the form of a number of activities, e.g. arranging internship opportunities for students in different industries/organizations, collecting suggestions about the topics of Final Year Design 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. In addition to that, study visits are arranged for the students and faculty at various industries and organizations.

7.11 MEDICAL DEPARTMENT

The Medical Department is located near Department of Humanities of this University. There are six Doctors in total including three at Main Campus (two in morning & one in the evening), one at LEJ Campus and one lady doctor at City Campus. The department is headed by Principal Medical Officer, besides that, paramedical staff, including one Female and other Male Nurse, assists the doctors in each shift.

There are numerous evolitional & therapeutic facilities available free of charges to the students in the Main Campus, including Emergency and Outpatient Medical services, pathological, Radiological and electrocardiographic apparatus for laboratory. Similarly prophylactic and therapeutic support in the form of Airway, breathing and circulatory intervention are also available.

Outpatient facilities are also available at peripheral Medical Sub-Centers, i.e. City and LEJ Campus. However, X-Ray, Pathological Laboratory and Ambulance facilities are restricted to Main Campus only.

7.12 PHYSICAL EDUCATION

University Sports complex headed by Manager Physical Education provides facilities for athletics, badminton, cricket, football, table tennis, hockey, physical fitness & basket ball.
The University Authorities reserve the right to make any changes in the University Prospectus without any prior notice.