

Dhaka University of Engineering & Technology, Gazipur



Information Booklet for Postgraduate Program

Institute of Energy Engineering

Academic Rules and Regulations for Postgraduate Program

1. Definitions:

- (i). 'University' means the Dhaka University of Engineering & Technology, Gazipur abbreviated as DUET, Gazipur.
- (ii). 'Syndicate' means the Syndicate of the University.
- (iii). 'Academic Council' means the Academic Council of the University.
- (iv). 'Vice-Chancellor' means the Vice-Chancellor of the University.
- (v). 'Pro-Vice Chancellor' means the Pro-Vice Chancellor of the University.
- (vi). 'Institute' means the Institute of the University.
- (vii). 'Director' means the Director of the Institute.
- (viii). 'Faculty' means the Faculty of the University.
- (ix). 'Dean' means the Dean of the Faculty of the University.
- (x). 'Department' means the Department of the University.
- (xi). 'Head' means the Head of the Department of the University.
- (xii). 'Registrar' means the Registrar of the University.
- (xiii). 'Controller' means the Controller of Examinations of the University.
- (xiv). 'CASR' means the Committee for Advanced Studies and Research of the University.
- (xv). 'ECF' means the Executive Committee of the Faculty of the University.
- (xvi). 'RAC' means the Research and Academic Committee for the Postgraduate Program of an Institute of the University.
- (xvii). 'Equivalence Committee' means the Committee for determining the equivalency of Undergraduate and Postgraduate Degrees obtained from other Universities.
- (xviii). 'Semester' means program of study to be completed within a specific period of time, an Academic Year will consist of two semesters.

2. Committee:

2.1 Committee for Advanced Studies and Research (CASR):

2.1.1 The CASR shall consist of the following members:

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| (i) Vice-Chancellor or his/her nominated person; | Chairman |
| (ii) Pro-Vice Chancellor | Member |
| (iii) Three Professors of the University to be nominated by the Syndicate; | Member |
| (iv) Three Teachers of the University having research capabilities and experience to be nominated by the Academic Council not below the rank of Associate Professor; | Member |
| (v) Two Experts from outside the University to be nominated by the Vice-Chancellor; | Member |

(vi) Director (Research & Extension).

Member-
Secretary

2.1.2 At least 50% of members will fulfill the quorum.

2.1.3 The term of the nominated members shall be of three years. A nominated member shall continue to act as member till a nominated substitute takes over.

2.1.4 The functions of the Committee shall be as follows:

- (i) to recommend the concerned authorities for promotion of research and development of advisory and extension services of the University;
- (ii) to approve the proposals for research, advisory and extension services submitted by the different Departments/Institutes of the University;
- (iii) to approve the Doctoral Committee;
- (iv) to approve the Teacher/Expert's name for supervision of research;
- (v) to recommend the Academic Council about the Board of Examiners for research evaluations;
- (vi) to do such other acts as may be assigned or referred to it by the Vice-Chancellor, the Academic Council or the Syndicate.

2.2 Executive Committee of Faculty (ECF):

2.2.1 The ECF shall consist of the following members:

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| (i) Dean of the Faculty; | Chairman |
| (ii) All Heads and Directors under the Faculty; | Member |
| (iii) All Professors and Associate Professors under the Faculty; | Member |
| (iv) Three Teachers of the University from outside the Faculty (closely related to the subjects) nominated by the Academic Council; | Member |
| (v) Two Experts, having experience in one or more relevant field but not working at the University to be nominated by the Academic Council. | Member |

2.2.2 The Chairman will nominate one of the members as mentioned in Article no. 2.2.1(iii) to act as the Member Secretary.

2.2.3 At least 50% of members will fulfill the quorum.

2.2.4 The term of the nominated members shall be of three years. A nominated member shall continue to act as member till a nominated substitute takes over.

2.2.5 The functions of the Committee shall be as follows:

- (i) to select the courses, syllabuses and marks to award Postgraduate Degrees;
- (ii) to recommend the Academic Council about the requirements for degree, diploma, certificate and other honors;

- (iii) to recommend the Academic Council to create/restructuring posts for the Teacher and Researcher of the concerned Departments under the Faculty;
- (iv) to take necessary actions as may be conferred on it by Academic Council.

2.3 Research and Academic Committee (RAC) for the Postgraduate Program:

2.3.1 The RAC shall consist of the following members:

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| (i) | The Director of the Institute; | Chairman |
| (ii) | All Professors and Associate Professors of IEE; | Member |
| (iii) | Any other teacher from the institute or outside who offers a course in a semester will be the member for that semester; | Member |
| (iv) | One Professor to be nominated by the Vice-Chancellor from outside the University in the field of Energy Engineering; | Member |
| (v) | One expert to be nominated by the BOG from outside the University from any National research organization, Industry or Business organization in the field of Energy Engineering; | Member |
| (vi) | If the existing member of Professors & Associate professors of the institute is less than 3 (three), professors (maximum 03) from other relevant departments/institutes of DUET can be nominated as member by the Vice-Chancellor; | Member |
| (vii) | Postgraduate Course Coordinator of the Institute. | Member-Secretary |

2.3.2 The term of office of the nominated members shall be two years but they shall continue in office till their successors are nominated.

2.3.3 The quorum for the meetings of the RAC shall be one-third of members, fractions being counted as one.

2.3.4 The functions of the RAC shall be as follows:

- (i) To develop the syllabuses and courses for the postgraduate studies;
- (ii) To deal with matters related to admission of students;
- (iii) To suggest a panel of names of paper setters and examiners in the subject or subjects concerned;
- (iv) To identify target groups for training, assess training needs and develop training strategies;
- (v) To prepare annual program on short courses, training and workshop;
- (vi) To identify the areas of research on the basis of national need and formulate research plan;
- (vii) To review the research proposals submitted by teachers and technical personnel, or select experts for reviewing the proposal, if necessary;

- (viii) To recommend the BOG for the appointment of exceptionally reputed technical personnel with vast experience as visiting fellow in the institute, if it feels that the appointment would help the research and human development activities of the institute, on such terms and conditions as the Board of Governors (BOG) may decide;
- (ix) To do such other things as are assigned or referred to it by the Vice-Chancellor, the BOG, or the Syndicate.

2.4 Equivalence Committee:

2.4.1 The Equivalence Committee shall consist of the following members:

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| (i) | Vice-Chancellor or his/her nominated person; | Chairman |
| (ii) | Pro-Vice Chancellor; | Member |
| (ii) | Deans of the Faculties; | Member |
| (iii) | Director of the Institute concerned; | Member |
| (iv) | Two Professors of the University to be nominated by the Academic Council; | Member |
| (v) | One Professor of the University to be nominated by the Vice-Chancellor. | Member |

2.4.2 The Chairman will nominate one of the members as mentioned in Article no. 2.4.1(iv) or (v) to act as the Member Secretary.

2.4.3 At least 50% of members will fulfill the quorum.

2.4.4 The term of the nominated members shall be of three years. A nominated member shall continue to act as member till a nominated substitute takes over.

2.4.5 The functions of the Committee shall be as follows:

To assess the Degrees obtained from other Universities/Institutes.

3. Postgraduate Course Coordinator:

The Member Secretary of the RAC of the Institute will act as the Postgraduate course coordinator of that Institute. The course coordinator should coordinate all the related activities regarding the respective Postgraduate program and will preserve all the related documents and records.

Academic Rules and Regulations for PGD, M Sc. Engineering and M Engineering Degree

1. Degrees Offered

The Post Graduate Diploma (PGD) and Masters (M Sc. Engg./ M Engg.) Degrees to be offered by the Institute under the Rules and Regulations are as follows:

- 1.1 Post Graduate Diploma in Energy Engineering abbreviated as PGD (EE)
- 1.2 Master of Science in Energy Engineering abbreviated as M Sc. Engg. (EE)
- 1.3 Master of Engineering in Energy Engineering abbreviated as M Engg. (EE)
- 1.4 Any other Postgraduate Degree in other branch of the Institute approved by the Syndicate on the recommendation of Academic Council may also be offered under the Rules and Regulations.

2. Eligibility for the Applicant

- 2.1 In order to get admission to the PGD and Masters Degree Program an applicant
 - (a) must have a minimum GPA of 3.00 out of 5.00 or 2.75 out of 4.00 or a first division in SSC or HSC or Diploma in Engg. or in equivalent examinations; and
 - (b) must have a minimum GPA of 2.50 for PGD and 2.75 for Masters out of 4.00 in 4 years Bachelors (Engineering/ Science) Degree in the relevant branch. Other than engineering degree in the relevant branch from public university, the Equivalence Committee will examine the equivalence and suitability of an applicant's degree for admission.
 - (c) The above requirements may be relaxed for applicants on deputation or sponsored by Academic Institutions / Research Organizations / International Organizations / DUET Graduates. Such relaxation shall be recommended by the Admission Committee of the Institute for approval of Academic Council.

3. Admission and Registration Procedures

- 3.1 Applications for admission to the above programs shall be invited through regular means of advertisement and shall be received by the Registrar office.
- 3.2 On the recommendation of the RAC of the Institute through EC of the faculty of Mechanical Engineering, the rules for admission into the University for Postgraduate Program shall be framed by the Academic Council from time to time.
- 3.3 There shall be an Admission Committee in the Institute as constituted by the RAC on the recommendation of the Director of the Institute.
- 3.4 Before being finally selected for admission an applicant may require to sit for an oral and/or written test before the Admission Committee. S/he may require to take pre-requisite course(s) as may be prescribed by the Admission Committee.
- 3.5 The selected applicants should be completed their course registration and related tasks as per the announcement of the Registrar office of the University.

4. Academic Requirements and Regulations

- 4.1 The minimum duration of PGD Degree Program shall be 2 (two) semesters and generally not more than 3 (three) Academic Years starting from the date of first registration.

- 4.2 The minimum duration of Masters Degree Program shall be 3 (three) semesters and generally not more than 5 (five) Academic Years starting from the date of first registration.
- 4.3 Each Academic Year shall consist of 2 (two) semesters. The duration of a semester will be of minimum 13 (thirteen) weeks.
- 4.4 The courses of a Program in the Institute shall be proposed by the RAC and approved by the Academic Council on the recommendation of EC of the faculty of Mechanical Engineering.
- 4.5 The courses to be offered by an Institute in any semester shall be determined by the Institute.
- 4.6 Academic progress of students shall be assessed in terms of credit hours earned by them. In a semester 1 (one) contact hour per week for theory courses or 3 (three) contact hours per week for Thesis/Project represent(s) 1 (one) credit hour. The number of credit hours for each course shall be specified in the syllabus of Institute.
 - 4.6.1 For the Degree of PGD, a student must earn a minimum of 24 (twenty four) credit hours of which 6 (six) credit hours shall be assigned for a Project. From the 18 (eighteen) credit hours theory courses, 6 (six) credit hours will cover for Core Courses (compulsory) and rest 12 (twelve) credit hours will cover the Optional Courses (selective).
 - 4.6.2 For the Degree of M Sc. Engg., a student must earn a minimum of 36 (thirty six) credit hours of which 18 (eighteen) credit hours shall be assigned for a Thesis.
 - 4.6.3 For the Degree of M Engg., a student must earn a minimum of 36 (thirty six) credit hours of which 6 (six) credit hours shall be assigned for a Project.
- 4.7 A student may be allowed to switch from M Sc. Engg. to M Engg. on the recommendation of the RAC through Director of the Institute before the commencement of a semester.
- 4.8 A student may be allowed to switch from M Engg. to M Sc. Engg. on the recommendation of the RAC through Director of the Institute and concerned Supervisor upon having the approval of the CASR before the commencement of a semester.
- 4.9 There shall be two categories of student, namely, full-time student and part-time student.
- 4.10 A full-time student must register a minimum of 12 (twelve) credit hours and a maximum of 15 (fifteen) credit hours per semester. If a full-time student gets an employment while continuing the program, s/he can continue the program as a part-time/full-time student with the written permission or leave from the employer.
- 4.11 A student, serving in different organizations, may be admitted as part-time student with a written consent of the employer. A part-time student may be allowed to register a maximum of 9 (nine) credit hours in a semester.
- 4.12 A student may be allowed to switch from part-time to full-time or vice versa on the recommendation of the RAC through the Director of the Institute before the commencement of a semester.
- 4.13 A student may be permitted to withdraw and/or change their registered courses within 3 (three) working weeks from the commencement of that semester on the recommendation of the course coordinator and the Director of the Institute. The concerned course Teacher and authorities will be informed of the decision.
- 4.14 On the recommendation of the RAC through CASR and by the approval of the Academic Council, a student may be allowed to transfer a maximum of 9 (nine)

credits for PGD/ M Sc. Engg. and 15 (fifteen) credits for M Engg. of the required theory courses of this Institute completed by the student at a recognized University/Institute provided that the courses were not taken earlier than 3 (three) calendar years from the date of their first enrollment in the respective program at the University. In addition, the student must obtain a minimum GPA of 3.00 out of 4.00 or its equivalent and those courses should be equivalent to the theory courses offered at the Institute.

- 4.15 If a student is unable to complete the final examination of a semester due to serious illness or serious accident or official commitment, s/he may apply to the Registrar in a prescribed form through Director of the Institute for total withdrawal from the semester within a week after the end of the semester final examination. The application must be supported by a medical certificate from the Chief Medical Officer (CMO) of the University or relevant Official documents. The Academic Council will take the final decision about such application on the recommendation of the RAC.
- 4.16 The qualifying requirement for graduation is that a student must earn a minimum CGPA of 2.65 based on the weighted average of their course work.
- 4.17 2 (two) courses may be repeated for improvement with the prior approval of the Director of the Institute on the recommendation of the course co-ordinator, provided that the student has a CGPA less than or equal to 2.65. In such cases, the better grade(s) amongst the previous examination and improvement examination would be retained.
- 4.18 A student shall not be allowed to continue the Program if s/he obtains a total of 4 (four) or more 'F' grades during the period of their studies.
- 4.19 If at the end of the second or any subsequent semester, the cumulative GPA falls below 2.50, s/he shall not be allowed to continue the Program.
- 4.20 In addition to the successful completion of theory course work, each student shall have to submit a Thesis on their research work or a Report on their Project work, as applicable, fulfilling the requirements as detailed in the subsequent Article no. 7 or 8.

5. Grading System

- 5.1 The grading system for assessing the performance of a student in credit courses shall be as follows:

<u>Numerical grade</u>	<u>Letter grade</u>	<u>Grade point</u>	<u>Merit description</u>
90% and above	A plus	4.00	Excellent
≥80% but <90%	A regular	3.50	Very good
≥70% but <80%	B plus	3.00	Good
≥60% but <70%	B regular	2.50	Average
≥50% but <60%	C	2.00	Pass
below 50%	F	0.00	Failure
	I		Incomplete
	S		Satisfactory
	U		Unsatisfactory
	X		Continuation

All the final grades for the course of PGD / M Sc. Engg. / M Engg. will be recorded in letter grade system. The Grade Point Average (GPA) shall be computed for each semester. The GPA will be calculated as follows:

$$GPA = \frac{\sum_{i=1}^n C_i G_i}{\sum_{i=1}^n C_i}$$

where, n is the number of courses passed by the student during the semester, C_i is the number of credits allotted to a particular course and G_i is the grade point corresponding to the grade awarded for that course(s). The overall or Cumulative GPA gives the cumulative performance of the student from first semester up to any other semester to which it refers and is computed by dividing total grade points ($\sum C_i G_i$) accumulated up to the date by the total credit hours ($\sum C_i$). Both GPA and Cumulative GPA will be rounded off to the second place of decimal for representing/reporting.

- 5.2 Course(s) in which a student gets 'F' grade shall not be counted towards credit hour requirements and for the calculation of GPA. Students may repeat the 'F' graded course(s) if it is offered again.
- 5.3 The 'B' and 'C' grades, up to a maximum of two courses, may be ignored for calculation of GPA on the written request of the student to the Director of the Institute and on the recommendation of the course coordinator, provided that the student has to fulfill the total course credit hour requirements in the remaining courses with a minimum GPA of 2.65.
- 5.4 The performance in all the courses including all the 'F' grades shall be reflected in the transcript.
- 5.5 Grade 'I' will be given only when a student is unable to sit for the examination of a course at the end of the semester because of circumstances beyond of their control. To get 'I' grade, s/he must apply to the Director of the Institute through the respective course Teacher within 1 (one) week after the examination of the respective course. S/he has to complete the course within the next 2 (two) consecutive semesters; otherwise s/he will get 'F' grade in that course. If that course is not offered within the next 2 (two) consecutive semesters, the student can take any other offered course as a replacement on the recommendation of RAC. A PGD / M Sc. Engg. student can apply for an 'I' grade for a maximum of 4 (four) same/different courses and an M Engg. Student can apply for an 'I' grade for a maximum of 6 (six) same/different courses.
- 5.6 Satisfactory ('S') and Unsatisfactory ('U') shall be used for final grading of the performance of Thesis/Project and non-credit courses. An 'X' grade shall be recorded for Thesis/Project continuation.
- 5.7 A student may enroll for non-credit course(s) termed as audit course(s) on the recommendation of their Thesis/Project Supervisor and Director of the Institute.

6. Conduct of Examination

- 6.1 In addition to class tests, assignments, term papers, etc. there shall be a written examination on all theoretical courses at the end of each semester. The respective course Teacher will be solely responsible for the performance evaluation of a student. The dates of the examinations shall be announced by the Controller of Examinations as advised by the Director of the Institute at least 2 (two) weeks before its

commencement. The final grade in a theoretical course shall be based on the performance of all class tests, assignments, term papers, etc. and written examination.

- 6.2 The Controller of Examinations shall keep the up-to-date record of all the grades obtained by students and shall publish the results at the end of each semester. A student may collect a copy of the grade sheet from the office of the Controller of Examinations at the end of each semester. In addition, each student is entitled to 1 (one) official academic transcript after the completion of their academic program from the office of the Controller of Examinations on production of document of clearance from all concerned Institutes and payment of the prescribed fees.
- 6.3 The Director of the Institute shall recommend the names of the paper setters and examiners for the semester final examinations at least 2 (two) weeks before the date of the commencement of the examination to the Vice-Chancellor for approval.

7. Thesis

- 7.1 The research work for a thesis shall be carried out under the Supervision of a full-time teacher, who should be the member of RAC of the Institute. A Joint-supervisor/Co-supervisor within or outside the Institute may be appointed (if necessary). The Supervisor, Joint-supervisor/Co-supervisor and the research topic shall be approved by the CASR on the recommendation of RAC after completion of at least 9 (nine) credit hours of course work and having a minimum CGPA of 2.65.
- 7.2 A student shall submit a Thesis proposal to the RAC through Supervisor. The RAC shall examine the proposal and recommend it for the approval of the CASR through the Director of the Institute. In special circumstances, the RAC may recommend any subsequent changes in the research topic and forward it through the Director of the Institute to CASR for further approval.
- 7.3 If any change is necessary on the approved Thesis (title, content, cost, Supervisor, Joint-supervisor/Co-supervisor, etc.), it shall be approved by the CASR on the recommendation of the RAC.
- 7.4 The research work should normally be carried out at the University. However, if necessary, with the approval of the RAC, the Supervisor can allow their student to carry out the research work outside the University.
- 7.5 At the end of a student's research work and with the consultation of the Supervisor, the student has to submit a Thesis which must be an original contribution to Engineering/Science and worthy of publication. Each student must submit at least 5 (five) numbers of printed copies of their Thesis in the prescribed format to the Director of the Institute on or before a date to be fixed by the Supervisor concerned in consultation with the Director of the Institute.
- 7.6 The student shall have to declare that the research work was carried out by them and has not been submitted elsewhere for the award of any other Diploma or Degree.
- 7.7 The Thesis should reflect a satisfactory knowledge in the field of research undertaken by the student.
- 7.8 Each student submitting a Thesis in the partial fulfillment of the requirements of a Degree, shall be required to take an oral examination, on a date or dates fixed by the Supervisor concerned in consultation with the Director of the Institute and must satisfy the examiners that s/he is capable of intelligently applying the results of their research to the solution of problems, of undertaking independent work, and also

shows evidence of satisfactory knowledge related to the theory and technique used in their research work.

- 7.9 An Examination Board for each student for Thesis and oral examination shall be approved by the Academic Council through the RAC and CASR on the recommendation of the Thesis Supervisor. The Supervisor shall act as the Chairman and the Director of the Institute will be an Ex-officio member of the Examination Board. The Board shall consist of at least 5 (five) members including the Director of the Institute and the Supervisor. The Examination Board shall be constituted as follows:

(i)	Supervisor	Chairman
(ii)	Joint/Co-supervisor (if any)	Member
(iii)	Director of the Institute	Member (Ex-officio)
(iv)	One or two Teachers from the RAC of the Institute	Member
(v)	One external member from outside the University/Institute	Member (External)

- 7.10 If any examiner is unable to accept the appointment or has to relinquish their appointment before the examination, the Vice-Chancellor shall appoint another examiner in their place, on the suggestion from the Supervisor in consultation with the Director of the Institute. This appointment will be reported to the CASR.
- 7.11 In case a student fails to satisfy the Examination Board in Thesis and/or oral examination, the student shall be given one more chance to resubmit the Thesis and/or take an oral examination as recommended by the Board.

8. Project

- 8.1 The Project work shall be carried out under the supervision of a full-time Teacher, who should be the member of RAC of the Institute. The Supervisor and the topic of the Project work shall be approved by the CASR on the recommendation of RAC after completion of at least 9 (nine) credit hours of course work and having a minimum CGPA of 2.65.
- 8.2 A student shall submit a Project proposal to the RAC through Supervisor. The RAC shall examine the proposal and recommend it for the approval of the CASR through the Director of the Institute. In special circumstances, the RAC recommend any subsequent changes in the Project topic and forward it through the Director of the Institute to CASR for approval.
- 8.3 If any change is necessary on the approved Project (title, content, cost, Supervisor etc.), it shall be approved by the CASR on recommendation of the RAC.
- 8.4 The Project work should normally be carried out at the University. However, if necessary, with the approval of the RAC, the Supervisor can allow their student to carry out the Project work outside the University.
- 8.5 At the end of a student's Project work and with the consultation of the Supervisor the student has to submit a Project report. Each student must submit at least 5 (five)

number of printed copies of their Project in the prescribed format to the Director of the Institute on or before a date to be fixed by the Supervisor concerned in consultation with the Director of the Institute.

- 8.6 The student shall have to declare that the Project work was carried out by them and has not been submitted elsewhere for the award of any other Diploma or Degree.
- 8.7 Each student submitting a Project report in partial fulfillment of the requirements of a Degree, shall be required to take at an oral examination, on a date or dates fixed by the Supervisor concerned in consultation with the Director of the Institute and must satisfy the examiners that s/he has gained satisfactory knowledge related to the Project work.
- 8.8 An Examination Board for each student for Project and oral examination shall be approved by the Academic Council through the RAC and CASR on the recommendation of the Project Supervisor. The Supervisor shall act as the Chairman and the Director of the Institute will be an Ex-officio member of the Examination Board. The Board shall consist of at least 5 (Five) members including the director of the Institute and the Supervisor. The Examination Board shall be constituted as follows:
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|-------|---|------------------------|
| (i) | Supervisor | Chairman |
| (ii) | Director of the Institute | Member
(Ex-officio) |
| (iii) | At least two Teachers from the RAC
of the Institute | Member |
| (iv) | One external member from outside
the University/ Institute | Member
(External) |
- 8.9 If any examiner is unable to accept the appointment or has to relinquish their appointment before the examination, the Vice-Chancellor shall appoint another examiner in their place, on the suggestion from the Supervisor in consultation with the Director of the Institute. This appointment will be reported to the CASR.
- 8.10 In case a student fails to satisfy the Examination Board in Project report and/or oral examination, the student shall be given one more chance to resubmit the Project report and/or take an oral examination as recommended by the Board.

9. Cancellation of Admission

The admission of a student shall be cancelled from the University on the following grounds:

- (i) Non-payment of fees of the University and the Halls of residence within a prescribed period.
- (ii) If the requirements in Article no. 4.18 and 4.19 are not fulfilled by the student.
- (iii) Forced to discontinue their studies by the Board of Discipline.
- (iv) Withdrawn officially from all the courses including Thesis/Project.

10. Academic Fees

Academic tuition and fees will be declared and reviewed by the appropriate authority of the University from time to time.

11. Extension of Time for Completion of Degree

The application for extension of time span of a student shall be approved by the Academic Council through CASR on the recommendation of the RAC. A prescribed form may be used for this purpose. The application must be submitted before the normal time span has been elapsed.

12. Admission Test

The written test generally takes place on a pre-announced date and time every year as per the University Postgraduate academic calendar. The duration and question type of the test will be announced.

Section wise question distribution for PGD's written test may be as follows:

Section	Topics	Weightage
1	Aptitude	25%
2	English	25%
3	Mathematics	25%
4	Energy Engineering Fundamental	25%

A descriptive type written test will be conducted for the Master's admission. The topics that will be covered are as follows:

- Basics of Thermodynamics
- Heat Transfer
- World and Bangladesh energy scenario
- Different types of energy resources and their usage
- Different forms of energy
- Energy conversion technologies
- Energy conservation and management
- Environmental impacts of energy production and consumption
- General knowledge related to energy
- Basic Electricity
- Basic Computer Operation

Academic Rules and Regulations for Doctor of Philosophy (Ph. D) Degree

1. Degrees Offered

The Doctor of Philosophy (Ph. D) degree to be offered by the Institute under the Rules and Regulations is as follows:

The Doctor of Philosophy (Ph. D) in Energy Engineering abbreviated as Ph. D (EE).

2. Eligibility for the Applicant

2.1 In order to get admission to the Ph. D Degree program an applicant

- a. must have a minimum GPA of 3.00 out of 5.00 or 2.75 out of 4.00 or a first division or equivalent in SSC or HSC or Diploma in Engg. or in equivalent examinations;
- b. must have a minimum CGPA of 2.75 out of 4.00 or its equivalent in B Sc. (Engineering/Science) degree in the relevant branch.
- c. must have a minimum CGPA of 2.75 out of 4.00 or its equivalent in Masters (Engineering/Science) degree in the relevant branch.
- d. The above requirements may be relaxed for applicants on deputation or sponsored by Academic Institutions / Research Organizations / International Organizations. Such relaxation shall be recommended by the Admission Committee of the Institute for approval of Academic Council.
- e. Other than engineering degree in the relevant branch from public university, the Equivalence Committee will examine the equivalence and suitability of an applicant's degree for admission.

2.2 Specific requirements for the Institute is that the minimum qualification for admission shall normally be an M Sc. Engg. / M Engg. Degree in the appropriate branch of engineering or its equivalent from any recognized Institution.

3. Admission and Registration Procedure

- 3.1 An applicant may apply to the Registrar for provisional admission to the Ph. D program in any semester.
- 3.2 There shall be an Admission Committee in the Institute as constituted by the RAC on recommendation of the Director of the Institute.
- 3.3 A selected applicant by the Admission Committee shall be provisionally admitted and may be required to pass the prerequisite non-credit courses as prescribed by the Admission Committee.
- 3.4 The selected applicants should complete their course registration and related tasks as per the announcement of the Registrar office of the University.

4. Appointment of a Supervisor

On provisional admission, the Admission Committee as constituted in Article no. 3.2 shall submit a name of a Supervisor who shall be a full-time faculty member belonging to the **Institute** and a Joint-supervisor / Co-supervisor from within or outside the Institute (if necessary). These selections have to be approved by the CASR. The supervisor shall prescribe

a plan of study to be undertaken by the student and supervise the progress of the candidate's work.

5. Final Registration

A provisionally admitted student shall be deemed to be eligible for final registration as a Ph. D student with effect from the date of their provisional admission after s/he passes the comprehensive examination.

6. Academic Requirements for the Degree

- 6.1 A student must complete all requirements for the Ph. D Degree within a maximum of 7 (seven) academic years (session) and not less than 3 (three) academic years (session) from the date of their provisional admission.
- 6.2 Academic progress shall be assessed in terms of Credit hours earned by a student. One Credit hour subject shall normally require 13 (thirteen) weeks of lecture for one semester while one Credit hour for Thesis work should normally require 39 (thirty nine) hours of research work for one semester. The number of credit hours for each course shall be as specified in the syllabus of the Institute.
- 6.3 A student must complete a minimum of 54 credit hours of which 45 credit hours shall be assigned for a Thesis.
- 6.4 There shall be two categories of student, namely, full-time student and part-time student.
 - 6.4.1 A student may enroll as a part-time student. A student, serving in different organizations, may also be admitted as part time students with the written consent of the employer. A part time student may be assigned a maximum of 9 (nine) credit hours of course including Thesis work in any semester.
 - 6.4.2 A full-time student must register for a minimum of 12 (twelve) credit hours and a maximum of 15 (fifteen) credit hours per semester. A full-time student shall not be allowed to be in the employment of any organization (even as a part-time employee). However, they may be employed as Teaching/Research Assistant at the University. If a full time student becomes an employee (full time or part time) of any other organization in the middle of a semester, s/he may, with the approval of the Director of the Institute and their Employer, be allowed to continue as a full-time student for that semester.
 - 6.4.3 A student may be allowed to switch from part-time to full-time or vice versa on the recommendation of the respective Doctoral Committee before the commencement of a semester.
- 6.5 The courses of study in the Institute shall be as recommended by the RAC and the Faculty and approved by Academic Council.
- 6.6 The courses that may be offered in any semester shall be as decided by the Institute.
- 6.7 A student on the recommendation of the RAC and as approved by the CASR may be allowed to transfer a maximum of 3.0 credits of the courses completed by the student at a recognized institution provided that the courses were not taken earlier than 5 (five) calendar years from the date of their first enrollment in the respective program at DUET and that the student obtained a minimum GPA of 3.00 out of 4.00 or its

equivalent in such courses and that the courses are equivalent to the approved courses of DUET

7. Grading System

- 7.1 The grading system for assessing the performance of a student in credit courses shall be as follows:

<u>Numerical grade</u>	<u>Letter grade</u>	<u>Grade point</u>	<u>Merit description</u>
90% and above	A plus	4.00	Excellent
≥80% but <90%	A regular	3.50	Very good
≥70% but <80%	B plus	3.00	Good
≥60% but <70%	B regular	2.50	Average
≥50% but <60%	C	2.00	Pass
below 50%	F	0.00	Failure
	I		Incomplete
	S		Satisfactory
	U		Unsatisfactory
	X		Continuation

All the final grades for the course of Ph. D will be recorded in letter grade system. The GPA will be calculated as follows:

$$GPA = \frac{\sum_{i=1}^n C_i G_i}{\sum_{i=1}^n C_i}$$

where, n is the number of courses passed by the student during the semester, C_i is the number of credits allotted to a particular course and G_i is the grade point corresponding to the grade awarded for that course(s). The overall or Cumulative GPA gives the cumulative performance of the student from first semester up to any other semester to which it refers and is computed by dividing total grade points ($\sum C_i G_i$) accumulated up to the date by the total credit hours ($\sum C_i$). Both GPA and Cumulative GPA will be rounded off to the second place of decimal for representing/reporting.

- 7.2 The course(s) in which the student gets F grade shall not be counted towards credit hour requirements and for the calculation of Grade Point Average (GPA).

7.2.1 The 'B and C' grades, up to a maximum of two courses, may be ignored for calculation of GPA at the written request of the student to the Director of the Institute on the recommendation of supervisor provided that the student has fulfilled the total course credit hour requirements in the remaining courses with a minimum GPA of 2.75.

7.2.2 When a course is repeated for improvement, better grade shall be counted for the calculation of GPA.

7.2.3 The performance in all the courses including all the 'F' grades shall be reflected in the transcript.

- 7.3 Grade 'I' is given only when a student is unable to sit for the examination of a course at the end of the semester because of circumstances beyond their control. To get 'I' grade s/he must apply to the Director of the Institute through the respective course teacher within one week after the examination of the respective course. S/he has to complete the course within the next 2 (two) consecutive semesters; otherwise s/he will get 'F' grade in that course.
- 7.4 Satisfactory ('S') and Unsatisfactory ('U') shall be used for final grading of the performance of Thesis and non-credit courses. An 'X' grade shall be recorded for Thesis continuation.
- 7.5 A student may enroll for non-credit course(s) termed as audit course(s) on recommendation of their Thesis Supervisor and Director of the Institute.
- 7.6 A student shall withdraw officially from a course within 2 (two) working weeks of the commencement of the semester or else their grade in that course shall be recorded as 'F' unless s/he is eligible to get a grade of 'I'. A student may be permitted to withdraw and change their course within the specified period with the approval of their Supervisor, Director of the Institute and the respective teacher(s) concerned. (In that case their grade in the courses registered shall be recorded as 'W' in his Academic Record but shall not be reflected in the transcript).

8. Doctoral Committee

A Doctoral Committee for each student shall be proposed by the Supervisor in consultation with the Director of the Institute. The committee shall be approved by the CASR on recommendation of the RAC. The Committee shall be formed within 1 (one) year from the date of the student's provisional admission. The Committee shall consist of at least five members but shall not exceed seven including the Director of the Institute and the Supervisor. The Doctoral Committee shall be constituted as follows:

(i)	Supervisor	Chairman
(ii)	Joint/Co-supervisor (if any)	Member
(iii)	Director of the Institute	Member (Ex-officio)
(iv)	At least two Teachers from the RAC of the Institute	Member
(v)	At least one external member from outside the University/Institute	Member (External)

The Doctoral Committee should meet from time to time on the request of the Supervisor to review the progress of the student. Under special circumstances CASR may approve any addition and/or alteration in the Doctoral Committee on the recommendation of the Supervisor through the Director of the Institute.

9. Research Proposal

- 9.1 The student, after passing the comprehensive examination, shall submit a research proposal to the Doctoral Committee which shall examine the proposal and

recommend it for the approval of the CASR through the Director of the Institute. In special circumstances the Doctoral Committee may recommend through the Director of the Institute to CASR for approval of any subsequent changes in the research proposal.

- 9.2 Research work for a Dissertation shall be carried out at this University or at a place(s) recommended by the Doctoral Committee. The work schedule and financial involvement should be mentioned in the research proposal for carrying out research work outside the university.

10. Conduct of Examination

- 10.1 In addition to class tests, assignments, term papers etc. there shall be a written examination on all theoretical courses at the end of each semester. The respective course teacher will be solely responsible for the performance evaluation of a student. The dates of the examinations shall be announced by the Controller of Examinations as advised by the Director of the Institute at least 2 (two) weeks before its commencement. The final grade in a theoretical course shall be based on the performance of all class tests, assignments, term paper and written examination.
- 10.2 The Controller of Examinations shall keep the up-to-date record of all the grades obtained by students and shall publish the results at the end of each semester. A student may collect a copy of the grade sheet from the office of the Controller of Examinations at the end of each semester. In addition, each student is entitled to 1 (one) official academic transcript after the completion of their academic program from the office of the Controller of Examinations on production of the document of clearance from all concerned Institute and payment of the prescribed fees.
- 10.3 The RAC shall recommend the names of the paper setters and examiners for the semester final examinations at least 2 (two) weeks before the date of the commencement of the examination to the Vice-Chancellor for approval.

11. Qualifying Requirements

11.1 Course Work

To qualify for the degree a student must earn a minimum Grade Point Average (GPA) of 2.75 out of 4.00 based on the weighted average of Grade Points (GP) in their course work.

- 11.1.1 2 (two) courses may be repeated for improvement with the prior approval of the Director of the Institute on the recommendation of Supervisor.
- 11.1.2 A student obtaining 'F' grade in a course may be allowed to repeat the course with the prior approval of Director of the Institute on the recommendation of Supervisor. Such approval shall be reported to the RAC.
- 11.2 A student shall not be allowed to continue the program if s/he obtains a total of 2 (two) or more 'F' grades in one or more than one courses taken together, during the period of their studies.

11.3 Comprehensive Examination

The date(s) and time of the comprehensive examination shall be fixed by the Doctoral Committee on the request of the Supervisor. The comprehensive examination shall

be held after the completion of the course work by the student. The theory courses should be completed within 3 (three) semesters.

The comprehensive examination shall comprise a written examination and/or an oral examination to test the knowledge of the student in their field of study and research.

The Doctoral Committee shall conduct the comprehensive examination. If a student fails in a comprehensive examination s/he shall be given one more chance to take the examination as scheduled by the Doctoral Committee.

- 11.4 In addition to successful completion of course works and comprehensive examination every student shall submit a Thesis/Dissertation on their research work fulfilling the requirements.

12. Thesis/Dissertation

- 12.1 At the end of the student's research work the student shall submit a Thesis/Dissertation which must be an original contribution to Engineering/Science and worthy of publication. At least 6 (six) printed copies of the Thesis/Dissertation in the prescribed format must be submitted to the Director of the Institute.
- 12.2 The student shall certify that the research work was done by them and that this work has not been submitted elsewhere for any other purpose (except for publication).
- 12.3 On the completion of the research work and submission of the Thesis/Dissertation an oral examination shall be arranged on a date(s) fixed by the Supervisor in consultation with the Director of the Institute in which the student shall defend their research work. The student must satisfy the examiners (as constituted in Article no. 14.1) that s/he is capable of intelligently applying the results of his/her research work to the solution of problems, of undertaking independent research and afford evidence of satisfactory knowledge related to the theory and technique used in their research work.
- 12.4 In order to qualify for the Degree, a student must have 2 (two) numbers of publications (of which at least one should be published in a journal) relevant to their research work.

13. Examination Board

- 13.1 An Examination Board for each student for Thesis/Dissertation and oral examination shall consist of the Doctoral Committee and one or more external examiner(s) to be approved by the Academic Council through the CASR on the recommendation of the Thesis/Dissertation Supervisor in consultation with the Director of the Institute. The Board shall consist of at least 6 (six) and maximum 8 (eight) members including the Director of the Institute and the Supervisor. The Supervisor shall act as the Chairman of the Examination Board. At least one external examiner shall be appointed from outside the University (DUET). If the external examiner is appointed from outside the country a copy of the Thesis/Dissertation should be sent to them for their evaluation and their written opinion be placed before the Examination Board.
- 13.2 If any examiner is unable to accept the appointment or has to relinquish their appointment before/during the examination, the Vice- Chancellor shall appoint

another examiner in their place, on the suggestion from the Supervisor in consultation with the Director of the Institute. This appointment will be reported to the CASR.

- 13.3 In case a student fails to satisfy the Examination Board in Thesis/Dissertation and /or oral examination, the student shall be given one more chance to resubmit the Thesis/Dissertation and/or appear in oral examination as recommended by the Board.

14. Cancellation of Admission

The admission of a student shall be cancelled by the University on the following grounds:

- (i) Non-payment of dues of the University and the Halls of residence within a prescribed period.
- (ii) If the requirements in Article no. 11.2 and 11.3 are not fulfilled by the student.
- (iii) Forced to discontinue their studies by the Board of Discipline.
- (iv) Withdrawn officially from the Ph. D program.

15. Academic Fees

Academic fees will be reviewed by the appropriate authority of the University from time to time.

16. Extension of Time for Completion of Degree

The application for extension of time span of a student should be approved by the Academic Council through CASR on the recommendation of the Doctoral Committee. A prescribed form may be used for this purpose. The application must be submitted before the normal time span has elapsed.

Rules and Regulations Relating to Discipline

General Discipline

1. There shall be a Board of Discipline (ছাত্র শৃঙ্খলা কমিটি) to supervise and control the discipline of the students of the University.
2. The Board shall consist of the following members:

i.	Vice-Chancellor	Chairman
ii.	Two Deans (one of the concerning faculty and other to be nominated by the Academic Council)	Member
iii.	Three Directors of Institutes (one of the concerning institute and other two to be nominated by the Academic Council)	Member
iv.	Two Provosts of Halls of Residence (To be nominated by the Academic Council)	Member
v.	Director (Students' Welfare).	Member Secretary

3. At least 50% of the total members of the board shall form a quorum. The term of office of the nominated member shall be two years.
4. All incidents which appear to be acts of indiscipline and misconduct committed by any student, including immediate action taken, if any, shall be reported to the Vice-Chancellor by the respective Provost in respect of indiscipline and misconduct in the Halls of Residence and their premises, and by the Director of the Institute in respect of indiscipline and misconduct in the class rooms, laboratories, work-shops, all parts of the academic premises and any other place in the campus, and by the Invigilator through the Chief Invigilator in respect of indiscipline and misconduct in the Examination Halls, and by the person concerned (through respective Director/Section Chief) from the students and employees of the University in respect of misconduct committed outside the University campus.
5. A student, who neglects his studies, disobeys and/or denounces orders, rules and regulations, ordinances, statutes of the University, shows misbehavior towards the employees of the University or commits any other offence which will be deemed by the Vice-Chancellor or Director of Students' Welfare or teachers of the University as misconduct and breach of discipline, will be liable to disciplinary action Which may range from warning, imposition of fines, suspension to expulsion for good from the University depending on the magnitude of the offence as will be deemed fit by the authorities competent to take disciplinary action as defined in Section 6.
6. Authorities to take disciplinary action with their respective powers to the extent to which they can impose punishment on any student or group of students are:

Authorities for taking Disciplinary Action	*Power	Appellate Authority
Board of Discipline	(i) Warning (ii) Imposing fine (iii) Suspension from Halls/University for any length of time and (iv) Expulsion from Halls/University for good	Academic Council
Vice-Chancellor	(i) Warning (ii) Imposing fine (iii) Suspension up to from 2 (two) years from Halls/University and (iv) Expulsion from the Hall for good	Board of Discipline
Director of the Institute (On students of his Institute)	Warning and Imposing fine up to Tk. 1000/-	Vice-Chancellor
Director of Students' Welfare	(i) Warning (ii) Imposing fine up to Tk. 1000/- (iii) Suspension from the Halls up to 2 (two) years and (iv) Expulsion from the Hall for good.	Vice-Chancellor
Provosts (on resident or attached students of his Hall of residence)	(i) Warning (ii) Imposing fine up to Tk. 500/- and (iii) Suspension from the Hall for a period of up to 2 (two) years.	Director of Students' Welfare

* Respective authority may impose one or more punishment(s) at a time. Any of the above authority will inform the Director of Students' Welfare for any type of punishment imposed on any student for record.

7. If the Vice-Chancellor feels that the action taken against a student or a group of students (by any of the above authorities other than Board of Discipline) on an offence brought to him is not appropriate or that no action has been taken on any offence observed by him, he will take appropriate disciplinary action against a student or a group of students.
If however, in any case of breach of discipline the Vice-Chancellor is of the opinion that a punishment more than a suspension of two years is required he shall refer the matter to the Board of Discipline for a decision.
8. A student or a group of students against whom an action has been taken by appropriate authority mentioned in column (1) of Section 6 may prefer an appeal to the appropriate appellate authority mentioned in column (3) of Section 6.
9. The Director of Students' Welfare will be responsible for enforcement of the disciplinary action taken against a student or a group of students. He shall maintain a register and shall record therein all actions taken against a student for indiscipline and misconduct and also

shall record in all Character Certificates/Testimonials issued by the Director of Students' Welfare to offenders, those actions taken against them if so indicated by the Vice-Chancellor and the Board of Discipline, unless allowed to be expunged/condoned by the Vice-Chancellor on written prayer from the offenders.

10. Character Certificates/Testimonials issued by the Director of Students' Welfare shall be produced by the students when requested for that certificate.

Discipline of Examinations

11. The Chief invigilator shall be responsible for maintenance of discipline in the examination Halls.
12. An Invigilator on duty in Examination Hall shall report to the Chief Invigilator in case of breach of discipline in the examination hall. The Chief invigilator may expel the examinee concerned from the hall debarring him from appearing in that particular examination.
13. Breach of discipline in the examination halls shall be reported by the Invigilator through the Chief Invigilator to the Vice-Chancellor.
14. The candidates shall strictly follow the following instructions.
- i. Candidates are forbidden to write their names on the cover or any part of the answer script. If any candidate does so, his answer script will not be assessed.
 - ii. Each candidate must write legibly his Examination Students Number on the cover of scripts. If any candidate omits to write Examination Student Number and Registration Number on the cover of his answer script, the paper may not be assessed.
 - iii. When more than one answer script is used, each additional script should be stitched to the first script immediately after it is supplied, and the Examination Student Number and Registration Number should also be written by the candidate on the cover of the additional scripts or scripts immediately.
 - iv. No loose paper will be provided for scribbling, and no paper is to be brought in for this purpose. Any candidate found with loose paper in his possession will be expelled from the examination hall. All works must be done in the scripts provided and pages must not be torn out. The scripts provided must be submitted; it cannot be replaced by another, but, if necessary, additional scripts will be given. All works intended for assessment by the examiner should be written on both sides of the paper.
 - v. Candidates are forbidden to write anything whatsoever on the question paper. In any matter not specifically mentioned in these rules, candidates are required to abide by decision of the invigilator in the examination room.
 - vi. No candidate will be allowed to leave examination room until one hour has elapsed from the time when the question papers are given out.
 - vii. Candidates are forbidden to carry Mobile Phone with them in the examination room.
15. Disciplinary action will be taken against candidates reported to have violated the instructions under Section 14 or resorted to unfair means and/or acts of indiscipline at the different examinations as follows:
- i. Attempts to communicate with other examinee or examinees in the examination hall: first time warning which may be accompanied by a change of seats; second time-

- deduction of 5% of the total marks of paper; third time-expulsion from examination hall for that paper.
- ii. Possession of related to the particular subject of examination or copying from any other source: expulsion from examination hall and cancellation of the examination and expulsion from the University for one to two years. Writings in the person of examinee or in his apparels, in papers, drawing instruments, typing in mobile phones and scales etc. found with him or near the desk, bench or chair will be considered as writings in possession of examinee.
 - iii. Possession of mobile phones, media players etc.: Deduction of 5% of the total marks of the paper.
 - iv. Use of violent language and holding out threats to examiners and invigilators: expulsion from the whole examination and/or expulsion from the University for good.
 - v. Attempts to get possession of the question paper or examination scripts before the examination: expulsion from the whole examination and expulsion from the University for one to two years.
 - vi. Writings on loose papers not related to the examination (viz. blotting paper, question paper etc.); seizure of the writings and cancellation of the answer script and expulsion from the examination hall.
 - vii. Attempts to influence the examiner: cancellation of the paper.
 - viii. Impersonating or causing to impersonate in the examination hall: cancellation of the whole examination and expulsion from the University for good.
 - ix. Insertion in the examination script, answer to any question or questions written outside the examination hall: cancellation of the whole examination and expulsion for one to two years.
 - x. Having a question answered by someone else: cancellation of the whole examination and expulsion for two years.
 - xi. If a student or outsider appears at the examination for any student: cancellation of the whole examination for both students, expulsion for two years for the student who appears at the examination for any student and one year for other student.
16. The invigilator is empowered to warn a student and deduct his mark up to 5% as mentioned in section 15 (i) above. The Chief Invigilator is empowered to expel students from the examination room/hall if he is satisfied after an on the spot enquiry that the student is guilty of misconduct mentioned in section 15, above. In all such cases the matter has to be reported to the Vice-Chancellor with incriminating documents, if any. Decisions for cancellation of the examination and expulsion from the University for a period of not exceeding 2 (two) years will be taken by the Vice-Chancellor. For expulsion for a period more than 2 (two) years, the Vice-Chancellor shall refer the matter to the Board of Discipline provided in Section 6.
17. As the Class Test/Quiz is the part of whole examination, therefore, disciplinary action for any misconduct in this examination will also be applicable as mentioned in section 11 through 16.