

REGULATIONS FOR PhD DEGREE PROGRAMS

SHORT TITLE

These regulations may be called the Mehran University of Engineering and Technology PhD Degree Regulations 2023 repealing such regulations framed by the University authorities (if any). These regulations shall be deemed to have come into force with effect from 2023 batch and onwards.

ELIGIBILITY FOR ADMISSION

i. 3.0 CGPA

- a) For admission in PhD programs, a minimum CGPA of 3.0 (out of 4.0 in the semester system) or 60% (in the annual system) in the ME/MS/MBA/MPhil/Equivalent Degree (18-years of education) in the relevant field of study, whether such degree is obtained from Pakistani or foreign universities.
- b) If the CGPA/Percentage is not mentioned on the transcript, the candidate must produce equivalent weightage from the parent university.

ii. Admission Test

The candidate must pass pre-admission test as either,

- a) Equivalent to GRE/HAT General, conducted by testing bodies accredited by HEC, with a passing score of 60% OR
- b) GRE General Test conducted by the University with the passing score of 60%. The University based test shall be conducted by the committee comprised of 3 members approved by the Vice Chancellor.

PROCEEDURE FOR ADMISSION

The applicant shall submit the application form duly completed in all respects along with the relevant documents by the last date fixed for this purpose. A student, if employed, shall have to obtain No Objection Certificate from his/her employer before registration. All submitted applications for admission shall be processed by the Directorate of Admissions. Incomplete application forms or applications not accompanied by the relevant documents and/or processing fee, or applications received after the due date will not be considered. The University reserves the right to refuse admission to any applicant without assigning any reason, or cancel the admission of a student at any stage if necessary.

Students seeking admission are required to pay the fees at the time of admission as approved by the University authorities. All fees paid are non-refundable except the caution money, which will be refunded at a time when student leaves the Institution.

TRANSFER OF CREDITS

Transfer of course work credits earned in other institutions/or from the university previously within last five years may be approved in individual cases up to a maximum determined by the Equivalence Committee of the University.

The transfer of research work is not permissible.

DURATION OF PROGRAM:

The minimum duration for completing all the requirements of the PhD Program shall be three years or six regular semesters. The duration starts from the date of admission and finishes at date of result declaration. The maximum duration, for completing all the requirements for the PhD degree program shall be six years or twelve regular semesters. However, based upon the progress of the PhD scholar, the ASRB, may extend the period up to two years (initially for one year) on account of any special circumstances on the recommendation of the Supervisor/Co-supervisor(s). The minimum time for PhD research shall not be less than 02 years from the date of delivery of the Initial seminar to the date of delivery of Final seminar. In the case of Re-delivery of Initial seminar, the 02 years' time shall be counted from the date of re-delivery of initial seminar.

For strengthening student's knowledge in his/her research work, he/she is required to complete the course work. Each PhD Degree Program shall carry a number of approved elective courses and each course shall be assigned 3 Credit Hours (CH). Each course shall be taught by full-time regular faculty member(s) of the University. A PhD Degree Program shall have minimum 18 CH of elective course work followed by the comprehensive examination. In addition, 36 CH of research work including minimum four seminars and open defense are mandatory for qualifying the PhD Degree Program. The duration of teaching time in each semester shall be 16 weeks.

The minimum requirement for evaluation of each course shall be as follows:

1. Assignment/ Test/ Quizzes
2. Mid semester examination
3. Final semester examination

GRADE EQUIVALENT

Grade	Grade Point	Marks			
		Theory		Practical	
		Max Marks 100	Max Marks 50	Max Marks 100	Max Marks 50
A+	4.0	85 & above	42 & above	85 & above	42 & above
A	3.75	75 to 84	37 to 41	75 to 84	37 to 41
B+	3.5	66 to 74	33 to 36	66 to 74	33 to 36
B	3.0	60 to 65	30 to 32	60 to 65	30 to 32
C+	2.5	55 to 59	27 to 29	55 to 59	27 to 29
C	2.0	50 to 54	25 to 26	50 to 54	25 to 26
F	0.0	0 to 49 (Fail)	0 to 24 (Fail)	0 to 49 (Fail)	0 to 24 (Fail)

- Fraction shall be considered as a whole number
- Subjects carrying more than 100 marks in Theory/Practical shall be awarded grades accordingly.

The results shall be prepared on the basis of Grade Point Average (GPA) based on credit hours and quality points

1. Credit Hour (C.H)

One Credit Hour for a particular course is generally to be considered as one hour of teaching theory per week.

2. Quality Point (Q.P)

For computation of the GPA the Quality Point is first determined by multiplying the value of the grade earned by the students with the credit hours of that course. E.g. if a student obtains “A+” grade for a 3 C.H course then the Q.P of this course will be calculated as follows:

$$Q.P = 4 \times 3 = 12$$

3. Grade Point Average (GPA)

Grade Point Average is an expression for the average performance of a student in the course he/she has been offered. This is calculated by adding the quality points of all the courses taken divided by the total number of C.H offered.

$$G.P.A = \frac{\text{Sum of Quality Points}}{\text{Sum of the Credit hours}}$$

4. Cumulative Grade Point Average (CGPA)

The Cumulative Grade Point Average (C.G.P.A) is the expression describing the performance of a student that is determined in the following way.

$$CGPA = \frac{\text{Sum of Quality Points for all the courses appeared}}{\text{Sum of the Credit Hours for all the courses appeared}}$$

The distribution of marks for a course shall be as follows:

	Maximum Marks 100
Test (s)/ Assignment(s)/ Quizzes	20
Mid Semester examination	20
Final Semester examination	60
Total	100

Final semester examination shall be of 3 hours duration for 3 CH courses. Each question paper shall contain 5 questions without any choice. Mid semester examination shall be of one hour duration and question paper shall contain two questions without any choice. The minimum passing marks in a subject are 50%. A student should have at least 75% attendance to appear in the examination. In genuine cases, maximum 10% condonation in attendance shall be the discretionary power of the Pro-Vice Chancellor on case-to-case basis of an application to be scrutinized by the Director/Co-Director and forwarded by Dean of the concerned faculty.

The procedure of conducting examination and declaration of results shall be as follows:

- i. The examination will be conducted by the Examination Department in collaboration with the concerned Institute/Directorate.
- ii. The scripts of all assignments will be returned and those of the tests and mid semester examination will be shown to the students after evaluation. Each blank page/gaps in the scripts will be stamped/lines drawn by the invigilator.

- iii. Teachers will prepare 3 copies of the result of each course separately on the prescribed proforma and will forward two copies to the Controller of Examinations through concerned Director/Co-Director.
- iv. The result will be announced by the Controller of examinations.
- v. For the award of PhD degree, a student must secure 3.00 CGPA in course work and must fulfill all other requirements.
- vi. If a student fails in one or more subjects, he/she will be given one chance to appear in the supplementary examination. If the student fails again in the same subject(s) then ASRB may allow him/her one more chance to appear in the special supplementary examination based upon his/her written request and the recommendations of the concerned Director/Co-Director.
- vii. If a student passes all subjects but secures less than 3.00 CGPA, he/she will be allowed to improve those subjects in which he/she has secured less than 3.00 GP. Normally, more than one chance for improvement of grades shall not be allowed. However, the ASRB may allow him/her one more chance of improvement of grades under special circumstances.

COMPREHENSIVE EXAMINATION

Following the completion of coursework, every PhD student shall be required to pass the comprehensive examination to be granted candidacy as a PhD researcher.

- i. To appear in the comprehensive exam, a PhD candidate must secure 3.00 CGPA in the PhD Course work.
- ii. The required coursework, comprehensive exam, and defense of synopsis/research proposals should be completed within the 1st six semesters (3 years) of the registration/admission into a PhD program. In case of noncompliance, the registration/admission may be cancelled and transcripts for completion of coursework may be issued to the student.
- iii. The following are the guidelines for a conducting Comprehensive Examination:
 - a) The controller of examination shall be responsible for conducting the comprehensive examination on the advice made by the Director through concerned Dean, Pro-Vice Chancellor, and Vice Chancellor.
 - b) The exam shall be conducted on one composite question paper of 120 marks. The question paper shall be composed of 120 MCQs. The duration of the exam shall be 120 minutes. The passing percentage of the exam shall be 60.
 - c) The exam shall cover the elective courses studied.
 - d) The exam should be based on recapitulation of the conceptual knowledge of the discipline to which the student is admitted.
 - e) The evaluation shall be on an aggregate basis, expressed in terms of pass/fail and shall not be graded.
 - f) In case a student fails to pass the comprehensive examination, he/she shall be allowed to retake the exam once.

APPROVAL OF RESEARCH PROPOSAL, SUPERVISOR AND SUPERVISORY COMMITTEE

- i. Student shall fill up the Research Proposal Proforma and pay the required processing fees through bank challan available in the office of the concerned Director/Co- Director.
- ii. The Research Proposal Proforma shall be signed by the student, his/her supervisor and co-supervisor(s), Chairman/Chairperson/Focal Person/Program Coordinator of the concerned Department/Program, Director/Co-Director of the Institute and the Dean of the concerned faculty.

- iii. The Research Proposal Proforma shall be submitted in the office of the concerned Director/Co-Director with the following documents:
 - a) Research Proposal. Each page of the proposal will be signed by the student and his/her supervisor and co-supervisor(s).
 - b) A copy of the Bank Challan(s)/proof for the payment of the processing fees
 - c) The Similarity index of the scanning report (Plagiarism). It must be less than or equal to 19% and no any single source should have a similarity index more than or equal to 5%.
 - d) Attested copy of the Enrollment Card
 - e) Valid Letter of HEC approved supervisor of the supervisor and co-supervisor(s).
- iv. The Director/Co-Director will process his/her application and forward it to the Advanced Studies and Research Board (ASRB) for approval. The ASRB shall also approve the supervisor/co-supervisor(s) along with the research proposal. The maximum number of co-supervisors shall not be more than two.
- v. The supervisor must be a full-time regular faculty member of the University, however, co-supervisor(s) can be opted from other universities, and/or industries, if needed.
- vi. ASRB will also approve the Supervisory Committee for the PhD student comprising the following members to evaluate/monitor the progress of students as per the University regulation.
 - a) Supervisor
 - b) Co-supervisor (s) (if any)
 - c) Expert (s) from the field of research

CONDUCT OF INITIAL SEMINAR/ DEFENSE OF RESEARCH PROPOSAL

- i. After approval of his/her research proposal by the ASRB, the student shall be required to deliver an initial seminar before the ASRB and experts.
- ii. The date of the conduct of the initial seminar will be announced by the concerned Director/Co-Director with the approval of the Vice Chancellor obtained through proper channel.
- iii. The student shall prepare a presentation of 15-20 minutes duration under the guidance of his/her supervisor/co-supervisor(s).
- iv. The Initial seminar shall be evaluated by the following:
 - a) The Dean of the concerned Faculty or his/her nominee (must be ASRB member). In case the Dean concerned is supervisor/co-supervisor, the Pro-Vice Chancellor/Vice Chancellor or his/her nominee shall evaluate the seminar.
 - b) At least three Advanced Studies and Research Board (ASRB) members, excluding Dean concerned or his/her nominee, Supervisor and Co-Supervisor(s).
 - c) One internal expert (other than supervisor/co-supervisor)
 - d) One external expert
- v. The evaluations shall be submitted to the ASRB for final approval.
- vi. In case the Initial Seminar is not approved by the ASRB, the student will be asked to deliver another seminar by incorporating the suggestions and observations of the ASRB members and experts.
- vii. After approval of the initial seminar, the research proposal must be evaluated by at least three experts in the relevant field, one from within the country and the two from a

technologically/academically advanced country. The panel of the experts will be proposed by the supervisor and approved by the ASRB.

- viii. Then student will proceed with his/her research work under the guidance of his/her supervisor(s) in accordance with the approved Regulations of PhD degree program, and deliver progress seminars and submit progress reports as required by the ASRB.

CONDUCT OF PROGRESS – I SEMINAR

- i. A student shall be eligible to deliver Progress – I seminar if
 - a) his/her initial seminar and research proposal evaluation by the experts is approved by the ASRB
 - b) minimum duration between the approved initial seminar and progress-I seminar is six months.
 - c) his/her course work including comprehensive examination is passed.
 - d) he/she has granted candidacy as a PhD researcher.
- ii. The date of the conduct of the Progress – I seminar will be announced by the concerned Director/Co-Director with the approval of the Vice Chancellor obtained through proper channel.
- iii. The PhD researcher will prepare a presentation of 15 - 20 minutes duration under the guidance of his/her supervisor and co-supervisor(s) and discuss the progress that he/she has achieved after his/her initial seminar.
- iv. The Progress – I seminar will be evaluated by the following:
 - a) The Dean of the concerned Faculty or his/her nominee (must be ASRB member). In case the Dean concerned is supervisor/co-supervisor, the Pro-Vice Chancellor/Vice Chancellor or his/her nominee shall evaluate the seminar.
 - b) At least three Advanced Studies and Research Board (ASRB) members, excluding Dean concerned or his/her nominee, Supervisor and Co-Supervisor(s).
 - c) One internal expert (other than supervisor/co-supervisor)
 - d) One external expert
- v. The evaluations shall be submitted to the ASRB for approval.
- vi. In case the Progress – I seminar is not approved by the ASRB, the PhD researcher will be asked to deliver another seminar by incorporating suggestions and observations of the ASRB members and experts.

CONDUCT OF PROGRESS – II SEMINAR

- i. A PhD researcher will be eligible to deliver Progress – II seminar if
 - a) his/her progress-I seminar is approved by the ASRB,
 - b) minimum duration between his/her approved progress-I seminar and progress-II seminar is four months and
 - c) he/she has completed at least 50% objectives.
- ii. The date of the conduct of the Progress – II seminar will be announced by the concerned Director/Co-Director with the approval of the Vice Chancellor obtained through proper channel.

- iii. The PhD researcher will prepare a presentation of 15 - 20 minutes duration under the guidance of his/her supervisor and co-supervisor(s) and discuss about the progress that he/she has achieved after his/her Progress – I seminar.
- iv. The Progress – II seminar will be evaluated by the following:
 - a) The Dean of the concerned Faculty or his/her nominee (must be ASRB member). In case the Dean concerned is supervisor/co-supervisor, the Pro-Vice Chancellor/Vice Chancellor or his/her nominee shall evaluate the seminar.
 - b) At least three Advanced Studies and Research Board (ASRB) members, excluding Dean concerned or his/her nominee, Supervisor and Co-Supervisor(s).
 - c) One internal expert (other than supervisor/co-supervisor)
 - d) One external expert
- v. The evaluations will be submitted to the ASRB for final approval.
- vi. In case the Progress – II Seminar is not approved by the ASRB, the PhD researcher will be asked to deliver another seminar by incorporating the suggestions and observations of the ASRB members and evaluators.
- vii. At least two Progress seminars are mandatory to qualify for the final seminar.

CONDUCT OF FINAL SEMINAR

- i. A PhD researcher will be eligible to deliver final seminar if:
 - a) his/her Progress – II seminar has already been approved by the ASRB.
 - b) minimum duration between his/her approved progress-II seminar and final seminar is four months.
 - c) minimum duration between his/her approved initial seminar and final seminar is two years.
 - d) his /her final version of thesis book (loose bound) is submitted.
 - e) he/she has published at least one research paper in the required category of the HEC recognized journal.
- ii. The PhD researcher will prepare a presentation of 30 - 45 minutes duration with the consultation of his/her supervisors.
- iii. The PhD researcher will inform the concerned Director/Co-Director in written through his/her supervisor/co-supervisor(s) that he/she is ready for the final seminar.
- iv. The Director/Co-Director will announce the date for the conduct of the final seminar with the approval of the Vice Chancellor obtained through proper channel.
- v. The final seminar will be evaluated by the following:
 - a) The Dean of the concerned Faculty or his/her nominee (must be ASRB member). In case the Dean concerned is supervisor/co-supervisor, the Pro-Vice Chancellor/Vice Chancellor or his/her nominee shall evaluate the seminar.
 - b) At least three Advanced Studies and Research Board (ASRB) members, excluding Dean concerned or his/her nominee, Supervisor and Co-Supervisor(s).
 - c) One internal expert (other than supervisor/co-supervisor)
 - d) One external expert
- vi. The Director/Co-Director shall submit the evaluations to ASRB for final approval.
- vii. If ASRB does not approve the final seminar, the PhD researcher will be asked to deliver another final seminar by incorporating suggestions and observations of the ASRB members and experts.

SUBMISSION OF THESIS BOOK AND CONDUCT OF OPEN DEFENSE AND VIVA-VOCE EXAMINATION

- i. The PhD researcher shall submit one hard copy (loose bound) and a soft copy of the thesis book to the concerned Director/Co-Director along with the processing fees of the thesis evaluation through his/her supervisor.
- ii. The PhD researcher will also submit the fees for anti-plagiarism services.
- iii. The concerned supervisor/co-supervisor shall scan the thesis for plagiarism and submit the same to the concerned director. The similarity index should be less than or equal to 19% and no any single source has a similarity index greater than or equal to 5%.
- iv. The soft copy of the thesis shall be sent to the approved examiners for their evaluation.

EXTERNAL EVALUATION OF PHD DISSERTATION

- i. The PhD dissertation must be evaluated by:
 - a) At least two external experts who shall be:
 - i. PhD faculty member from the world top 500 universities ranked by the Times Higher Education or QS World Ranking in the year corresponding to dissertation evaluation year OR
 - ii. Pakistan-based Distinguished National Professors, Meritorious Professors from any national university; or professors from top universities ranked by HEC; or professors from any Pakistani University having a minimum H-Index 30 for Sciences/ Engineering, 15 for Social Sciences or 8 for Art & Humanities as determined by Web of Science.
 - OR***
 - b) At least one external expert qualifying any one of the conditions mentioned at 'a' above if the PhD candidate publishes dissertation research in a peer-reviewed journal that is classified by the HEC in category W for Sciences/ Engineering and X or above for Social Sciences.
- ii. The following general guidelines shall, at least, be observed while selecting external evaluator:
 - a) Relevance of Expertise: in the same or related fields as in the dissertation.
 - b) No Conflict of Interest: in personal, financial, or professional stakes in a particular decision or outcome.
 - c) Objectivity: capable of making unbiased evaluations.
 - d) Diversity: in terms of geography, culture, professional backgrounds etc.
 - e) Reputation: must be good in the field, with a track record of fair and thorough evaluations.
 - f) Availability: should have the time and availability to review the dissertation.
 - g) Professionalism: capable of conducting themselves in a professional and respectful manner throughout the evaluation and defense process (if applicable).
 - h) Communication: capable of providing clear and constructive feedback on the dissertation.
 - i) Confidentiality: capable of maintaining confidentiality and protecting the intellectual property of the dissertation.
 - j) Compatibility: well-versed with the research methodology, approach, and theories used in the dissertation.

- iii. Once satisfactory report is received from the approved evaluators, and the comments/suggestions given by External Evaluator(s) are effectively incorporated by the PhD researcher in the dissertation, he/she will be allowed by the ASRB to appear in the open defense and viva voce examination to defend his/her thesis. However, if the research work is not considered satisfactory by the external evaluator(s) the PhD researcher shall incorporate suggestions given by the evaluators and resubmit modified thesis through his/her supervisor for further evaluation by the External Evaluator(s).

PHD OPEN DEFENSE AND VIVA VOCE

- i. The PhD researcher shall submit two hard copies (loose bound) of the thesis book to the concerned Director/Co-Director through his/her supervisor for viva voce.
- ii. The supervisor shall propose a panel of external and internal examiners for the conduct of the viva voce examination.
- iii. The concerned Director/Co-Director will submit a panel of external and internal examiners to Vice Chancellor through proper channel for approval of one external examiner and one internal examiner.
- iv. The Director/Co-Director will send the names of the approved examiners to the Controller of examinations along with two hard copies of the thesis book.
- v. The Controller of Examinations will send copies of the thesis to the approved examiners for their evaluation and conduct of final viva voce examination.
- vi. The viva voce examination will be preceded by the open defense and will be conducted by the external and internal examiners in the presence of the concerned Director/Co-Director.
- vii. If the examiners recommend that the PhD researcher is successful at the viva-voce examination, he/she may be declared to have passed the Doctor of Philosophy Degree examination. In case of failure, a second examination may be conducted on the recommendations of examiners with approval of the Vice Chancellor. In normal circumstances, no PhD researcher shall be permitted a third examination. However, the ASRB may allow the third examination under genuine circumstances.
- viii. PhD researcher shall incorporate the minor/major changes and suggestions/comments, if any, of the panel of examiners.
- ix. The PhD researcher will submit the final soft copy of the thesis after incorporating all suggestions/comments, if any, through the concerned director to the focal person of the Anti-Plagiarism Cell of the University to scan it for finding authenticity of the Thesis through HEC approved software for plagiarism.
- x. If the scanning report has a similarity index less than or equal to 19% and no single source has a similarity index greater than or equal to 5% the thesis will be accepted for award of the degree. Otherwise, it will be returned to the PhD researcher. This procedure will be repeated until the minimum similarity index as defined above is met.
- xi. The hard bound copies prepared on guidelines and approved by the concerned Director/Co-director and evaluation report of the examiners duly signed by all concerned will be submitted to the Controller of Examination for announcement of the result. The scanning report shall also be submitted.
- xii. The hard and softcopy of the thesis shall be submitted to the HEC for PhD country directory.

RESEARCH PUBLICATION

For award of PhD degree, a PhD researcher shall be required to publish research articles meeting the following criteria:

- i. At least:
 - a) One research article in W category journal or two research articles in X category journals, for Science/ Engineering disciplines
 - b) One research article in X category journal or two research articles in Y category journals, for Social Science disciplines
- ii. The PhD researcher shall be the first author of these publications.
- iii. The research article shall be relevant to the PhD research work of the PhD researcher.
- iv. The article shall be published after approval of the Initial Seminar.
- v. The article shall be published in a relevant research journal.

COMPLETION REPORT

Concerned director shall submit a completion report of Award of PhD Degree/ Post Graduate Diploma to ASRB.

AMENDMENT TO REGULATION

These Regulations may be amended from time to time as deemed fit by the authorities of the Mehran University of Engineering & Technology and unless specifically stated otherwise, the amended Regulations shall apply to students registered in 2023 and onwards.