

PhD Rules in PEC University of Technology

1. Objective of the PhD Programme

The PEC University of Technology has a mission to develop high quality scientific and engineering specialists having strong base of principles of science and the scientific methods, deep understanding of their chosen areas of specialization, the motivation to learn continually, interact with multi-disciplinary groups and to handle new challenges offered by the front-end technologies.

The PhD Programme is designed to impart knowledge, and consolidate concepts and intellectual skills through courses, seminars, projects, and thesis work. Above all, it helps the scholars to develop the capacity for free and objective enquiry, courage and integrity, awareness and sensitivity to the needs and aspirations of the society.

The Programme provides the candidates an enabling research experience during their stay in the Institute thus helping them to enter their professional life with right perspective and knowledge related to their respective fields of specialization.

2. Admission to PhD. Programme

Admission to the PhD programmes is made on the basis of interview or written test or both as determined by PhD Admission Committee of the Department/Centre provided the candidate fulfils all the requirements at the Institute level and the selected candidate deposits the requisite fees for the PhD Programme. Applications are invited from candidates by advertising the programmes in leading Newspapers in the beginning of Odd semester and in the beginning of Even semester, every year.

Admission to PhD Programme is also possible any time during the year through Department / Centre Admission Committee with the approval of the Chairman Senate through Dean Academic Affairs for all categories of scholars although the course registration, where required, will be possible only at the beginning of next semester. The PhD Admission Committee of a department / centre will consist of concerned RDC plus all potential PhD supervisors.

3. Categories of Scholars/Admissions

- Full-time Non-Sponsored with scholarship.
- Full-time Non-Sponsored without scholarship
- Full-time Sponsored.
- Part-Time.

Financial aid /Assistantship may be granted subject to availability of grants from PEC / UGC / DST/CSIR, etc.

As approved in the Senate Meeting held on 07.08.2009

4. Eligibility Criteria for Admission To PhD Programme

4.1 *For Full-time Non-Sponsored Scholars:*

Minimum Eligibility:

1. Master's degree in Engineering/Technology or Master's degree in Science / Humanities / Management or equivalent in a relevant discipline with 55 % marks in aggregate for general category.
2. The candidate must have a valid Gate score or must have been admitted to the M. Tech Programme with a valid Gate score. For admission to PhD Programmes in Science/Humanities/Management the candidates must have a NET Fellowship (UGC / CSIR) valid from the current year in relevant areas.
3. Provided that the condition for Gate / UGC NET will not be applicable to Full-time Non-Sponsored without scholarship category of candidates.

Selection basis: Interview will be held by Admission Committee of the Department. At the time of interview doctoral candidates are expected to discuss their research interest/area. If required, a written test may also be conducted by the Admission Committee of the concerned Department before the interview.

4.2 *For Full-time Sponsored Scholars:*

Minimum Eligibility: Master's degree in Engineering/Technology or Master's degree in Science/Humanities or equivalent in relevant discipline with 55% marks in aggregate for general category. These candidates must have served with the sponsoring organization for a minimum of 2 years on a full-time basis. The sponsoring organization needs to provide an undertaking as per Note 5.

Selection basis: Interview will be held by Admission Committee of the Department. At the time of interview doctoral candidates are expected to discuss their research interest/area. If required, a written test may also be conducted by the Admission Committee of the concerned Department before the interview

4.3 *For Part-Time Scholars:*

Minimum Eligibility: Master's degree in Engineering/Technology or Master's degree in Science/Humanities or equivalent in relevant discipline with 55% marks in aggregate for general category. These candidates must have continued to serve the organization for a minimum of 2 years. The candidate must provide a No-Objection Certificate from the employer as per Note 6.

Selection basis: Interview will be held by Admission Committee of the Department. At the time of interview doctoral candidates are expected to discuss their research interest/area. If required, a written test may also be conducted by the Admission Committee of the concerned Department before the interview

NOTES:

1. The candidate may, if he/she so desires, give the choice of possible supervisors in his / her application for PhD Programme. However, this would not be a limitation on allocation of supervisor(s).

2. 15% seats are reserved for SC candidates and 7.5% seats are reserved for ST candidates.
3. For SC and ST candidates there will be a relaxation of 5% in the minimum aggregate marks for admission in all categories of scholars.
4. Seats as per Institute norms are reserved for the physically handicapped persons in all the PhD Programmes combined. The distribution of these seats will be coordinated centrally.
5. Sponsorship letter (on letterhead of the sponsoring organization) should include an undertaking stating that the period of study of the candidates will be treated as 'on duty' with usual salary/allowances, and he/she will be relieved for the period of studies.
6. Only employees of Government Departments or Research Development Organizations or Public Sector Undertakings or Registered Industries / Companies and also the faculty of an educational institution will be eligible for admission to PhD Programme as Part-Time Scholars. A candidate under this category has to produce a 'No Objection Letter' from his/her employer stating that (i) He / she is on the regular payroll of the organization, (ii) He/she is permitted to pursue studies on a part-time basis, and (iii) His/her official duties will permit sufficient time for research.
7. Full-time, non-sponsored candidates with scholarship coming on study leave must show proof of at least 3 years study leave before being allowed to register after the selection.
8. In case an eligible degree does not bear the awards in percent, the following Conversion Formula will be used to convert CGPA into percentage of marks for the purpose of admission at PEC:
Percentage of Marks = [(CGPA – 0.5) / 10] x100, on 10-Point Scale. For 4-point-scale following table may be used:

Percent Marks	GPA
55	2.10
60	2.30
65	2.50
70	2.70

9. The minimum prescribed percentage will be based on the marks obtained in aggregate of all the years/ semesters of the qualifying examinations as per the weightage followed by the concerned University.
10. The relevancy / equivalency of Master's degree for admission to a given discipline will be defined / determined by the concerned RDC.
11. There is no residency requirement for local PhD candidates (both full-time as well as part-time) who are residing within 50 km of PEC.
12. For the part-time PhD candidates, who are residing beyond 50 km of PEC, a residency requirement of one-semester duration is mandatory in the first year of PhD Programme.
13. For full-time PhD candidates, who are residing beyond 50 km of PEC, a minimum residency of four continuous semesters from the beginning of the PhD Programme is mandatory.
14. The attendance of full-time PhD candidates will be governed by the attendance requirements of the Institute.

15. Part-time PhD candidates will be required to meet the supervisor at least eight times in a semester.
16. For admission to PhD Programmes in Science/Humanities/Management if the candidate does not have a NET Fellowship (UGC / CSIR) valid for the current year in relevant areas, the candidates has to qualify a PhD Entrance Test of the institute.
17. Only the predetermined number of students may be admitted to a PhD programme.
18. As per the provisions 1(5) of the UGC Regulations 2009, PhD program will not be conducted through distance education mode.

5. Eligibility Criteria for PhD Supervisor

- i. Every registered scholar shall be assigned one or more research supervisor as approved by the RDC.
- ii. Any regular full-Time Faculty member of the concerned department holding a Doctorate degree having at least two years of service *after doing PhD* can be appointed a Supervisor.
- iii. Depending on the problem a scholar may be assigned two supervisors designated as Supervisor and Co-Supervisor. In no case the number of Co-Supervisors shall be more than one. *The condition of two years of service after doing PhD in 5(ii) above will not be applicable to the Co-Supervisors.*
- iv. In special cases an additional Co-Supervisor may be allowed by Chairman Senate from outside the Institute/University within or outside the country.

6. Allocation of Supervisor

The allocation of the supervisor for a selected student shall be decided by the *RDC of the department concerned* in a formal manner depending on the number of students per faculty member, the available specialization among the faculty supervisors and the research interests of the student as indicated by him / her at the time of interview and the options given by the students. The allotment / allocation of supervisor shall not be left to the individual student or faculty.

The RDC is to facilitate this process in the academic interest. During the admission process, Potential supervisors can express their interest to RDC in guiding a student and this will be taken on record. After joining, the PhD student can meet the potential supervisor and may give his options for consideration by RDC.

The RDC shall take the final decision for the allocation of supervisor(s) as per Rule 5 within 6 months of the admission of the candidate in a formal meeting where Potential supervisors are present.

7. Ph.D. Course Work

After having been admitted, a PhD candidate shall be required to undertake course work for minimum period of one semester. For this purpose, the PhD scholar has to take at least a minimum number of two courses subject to the condition that a minimum of 6 total credits for the PhD Course Work will be mandatory. Further, one of the courses offered during the course work will be course on research methodology, which may include quantitative methods and computer applications. It may also involve reviewing of published research in the relevant field. The other course will be based on the recommendations of the supervisor. The minimum requirement to pass the PhD Course work will be of CGPA of 6.5. The Course work may span over more than one semester subject to the other conditions in these rules as applicable.

The minimum-qualifying requirement for allowing a student to proceed further with the writing of the dissertation will be as per those given in Para 8 and 9.

If found necessary course work may be carried out by doctoral candidates in sister departments / institutes either within or outside the university for which due credit will be given to them.

8. State-Of-Art Seminar

As one of the essential requirements for the registration in the PhD Programme, a candidate must present his research proposal in a State-Of-Art Seminar to the members of RDC to delineate the current state of knowledge through a suitable literature survey about the specific problem on which he/she wants to pursue research work. The methodology that he intends to use to conduct the research and the goals he intends to achieve on the completion of the research work should form an integral part of the proposal.

A copy of the research proposal will be given to each member of the RDC of the department during the presentation.

This will be an open seminar. The faculty and post graduate students of the department will invariably be invited to the State-Of-Art seminar.

The Viva Voce will form an essential component of the State-Of-Art seminar.

This presentation can be scheduled at least one semester after admission of candidate to PhD Programme, but no later than 2 years after his/her admission. In case a candidate fails to complete this requirement within 2 years, his/her admission to PhD Programme will be cancelled. The supervisor will coordinate the State-Of-Art Seminar.

On acceptable proposal and presentation in the State-Of-Art Seminar, the RDC of the department will certify the fulfillment of the requirements for the registration of the candidate as per *Rule 9* and send its recommendation to DAA for registering the

candidate. On receiving these recommendations, the DAA may register the candidate for PhD Programme provided the candidate meets all the other requirements of the institute.

9. PhD Registration

A candidate may be registered for the PhD Programme provided he/she fulfills the following requirements:

1. The candidate must have completed the Course Work as per Rule 7.
2. A candidate has presented his/her research proposal in a State-Of-Art seminar to the members of RDC to delineate the current state of knowledge through a suitable literature survey about the specific problem on which he/she wants to pursue research work. The RDC will certify that the proposal and the presentation were acceptable as a token of the fulfillment of this requirement.
3. A candidate will submit 10 copies of his/her accepted research proposal to the DAA duly signed by the supervisor and forwarded by Chairman RDC.

On receiving a report from the Chairman RDC certifying the fulfillment of the requirements for the registration of the candidate as per Rule 9, the DAA may register the candidate for PhD Programme provided the candidate meets all other requirements of the institute.

10. Monitoring Process

After the candidate is registered in PhD Programme, the progress of the research work will be continuously monitored through end-of-the-semester reports on a prescribed Performa to be sent by the supervisor to the RDC, which will make recommendation to the Dean Academic Affairs for continuation of the candidate in the PhD Programme.

11. Open Pre-Submission Seminar

There will be an open presentation of the work done by the candidate before the thesis is bound and submitted for evaluation provided that the candidate has published one research paper (or the same has been accepted for publication) in a refereed journal on the basis of his PhD research work. The candidate shall produce evidence of same in the form of acceptance letter or the reprint. The RDC may recommend modification or extension of the work required before the thesis is completed.

A certificate from the supervisor(s) stating that all modifications, if any, recommended by RDC have been incorporated, the research work being reported is the original contribution of the candidate and the work has not been presented anywhere else for the award of any other degree, will be appended to the bound thesis.

12. Submission of Thesis

A thesis may be submitted not earlier than 2 year from the date of registration or 3 years from the date of admission whichever is later. A brief synopsis of the thesis (not less than 1000 words and not more than 2000 words) must accompany the thesis. The

thesis must strictly fulfill the requirements of the format prescribed by Senate Post-Graduate Committee. The candidate should submit four hardbound copies of the thesis along with six copies of the synopsis for evaluation by the Thesis Reading Board. Soft copy of synopsis as well as of thesis must accompany the hard copies at the time of submission of thesis.

13. Thesis Reading Board

To evaluate the PhD thesis submitted by a PhD candidate a panel of 6 readers (evaluators), as far as possible from the authors/experts who have been cited in the thesis of the candidate, will be proposed by the supervisor of the candidate out of which at least 3 will be from IISc, IITs, NITs, universities and organizations within or outside the country.. The panel should be duly recommended by the Head of the Department and sent to the Chairman, Senate through Dean Academic Affairs for approval/addition/deletion and listing in a preferential order that is to be kept confidential. Synopsis of the thesis prepared by the candidate will be sent to the top 3 readers from the list approved by the Chairman, Senate for obtaining their willingness to evaluate the thesis. On receiving the acceptance from all the top 3 readers, the copies of the thesis will be sent to the top 2 readers from the list for evaluation out of which at least one shall be from outside the state. In case the acceptance is received from only 2 readers the thesis will be sent to these readers. In case of a refusal of two or more than 2 readers from this list, the next readers in the list of 6 readers mentioned above will be approached for the willingness to evaluate the thesis.

The readers (evaluators) of the thesis will be required to submit detailed reports and make summary recommendations as to whether the

- (a) Thesis is acceptable as it is (or with minor corrections)
- (b) Thesis is acceptable but requires significant modifications (which must be carried out by the candidate and approved by the same reader who has sent these recommendations)
- (c) Thesis is rejected out right.

Only the theses that are rated acceptable by both the readers (after incorporation of modifications, when required) will be processed further.

In case the report from one of the readers is rated not acceptable even after the modifications are incorporated, the reports of both the readers will be sent to an independent referee to be appointed by the Chairman Senate from the list of 6 readers for final verdict about the acceptability of the thesis.

Further, in case the list of approved readers is exhausted, more names could be invited by Chairman Senate for the purpose.

14. Oral Defence Board

Based on reports from the Thesis Reading Board, the Oral Defence Board will examine the candidate through an openly defended Seminar/Viva Voce for the award of the PhD degree. Oral Defence Board will consist of

- (a) One of the Readers of the thesis and
- (b) The Supervisor(s) of the PhD thesis.
- (c) The Chairman RDC

In case the Chairman RDC is also the supervisor, the Chairman Senate will nominate an additional member to the Board.

The Chairman RDC will coordinate the conduct of the Oral Defence on a date suitable to and in consultations with Reader of the Thesis, Supervisor(s) and the candidate.

Based on satisfactory performance of the candidate in the Oral Defence, the Oral Defence Board will send its recommendation to Chairman Senate for the approval by the Senate, PEC University of Technology for the award of PhD degree.

15. Duration

The minimum duration of the PhD Programme will be 3 years from the date of admission. The maximum duration will be limited to 5 years from the date of registration. The Chairman Senate can grant extension beyond this period only after the candidate again presents a State-Of-Art Seminar with current status of research work and *this* is approved through the same channel as it was done in the first instance provided that the supervisor of the candidate recommends the extension.

16. Research Degree Committee

Each department will constitute a Research Degree Committee for a two-year term consisting of

- i. Chairman of RDC - Head of the Department with a PhD Degree otherwise senior most Professor of the department with PhD Degree, failing which a senior professor from an allied department with PhD degree may be nominated by the Chairman Senate.
- ii. All Professors of the department.
- iii. Two faculty members with PhD degree other than the Professors by rotation. If faculty members with PhD degree are not available in the department, then the Chairman, Senate, can nominate these from an allied department. In case of Applied Sciences department at least one faculty member with PhD degree from various constituents/ disciplines in the department may be taken on rotational basis.
- iv. One Professor from an allied Department nominated by the Chairman Senate.

17. Repository with UGC

Following the successful completion of the evaluation process and announcements of the award of PhD the university shall submit a soft copy of the PhD thesis to the UGC within a period of thirty days for posting the same in INFLIBNET accessible to all institutions/universities.

Along with the degree, the University / Institution shall issue a provisional certificate certifying to the fact that the degree has been awarded in accordance with the provisions to the UGC Regulations 2009.

18. Other Rules

Rules pertaining to leave of absence, vacation, discipline and other such matters will be same as those for students of Master's Programmes in the Institute or those framed specifically for PhD Programme.

19. Interpretation of Rules

For any interpretation of these rules, the matter shall be referred to Chairman, Senate.

20. Amendment of Rules

These rules can be amended by the Senate depending upon the academic requirements of the Institute.