

Doctor of Philosophy Regulations 2024

(As per UGC Regulations 2022)

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH CHENNAI

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NITTTR CHENNAI

DOCTOR OF PHILOSOPHY – REGULATIONS 2024

TERMINOLOGY USED

1. Act - University Grants Commission Act, 1956 (3 of 1956)
2. Adjunct Faculty - A part-time or contingent instructor, but not a full-time faculty member hired to teach
3. Chairperson - Head of the Faculty
4. Commission - The University Grants Commission established under Section 4 of the UGC Act, 1956
5. Coursework - Courses of study recommended by the Department/ Centre to be undertaken by a student registered for the Ph.D. Degree
6. Credit - The number of hours of instruction required per week for a semester. A three-credit course in a semester means three one-hour lectures per week, with each one-hour lecture counted as one credit.
7. Cumulative Grade Point Average (CGPA) - A measure of the overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all semesters. It is expressed up to two decimal places.
8. Degree - Degree awarded by NITTTR Chennai under the provisions of section 22 (3) of the UGC Act.
9. Director - Director, NITTTR Chennai.
10. External examiner - An academician/ researcher with published research work who is not part of NITTTR Chennai where the Ph.D. Scholar has registered for the Ph.D. programme.
11. Foreign Educational Institution - (i) an institution duly established or incorporated in its home country and offering educational programmes at the undergraduate, postgraduate, and higher levels in its home country and (ii) which offers programme(s) of study leading to the award of a degree through conventional face-to-face mode, but excluding distance, online, ODL mode.
12. Grade Point - A numerical weight allotted to each letter grade on a 10-point scale.
13. Head of the Department/ Centre - Head of the Department/ Centre of the Supervisor.
14. Interdisciplinary Research - Research conducted by a Ph.D. Scholar in two or more academic disciplines.

15. Joint Supervisor - A recognized Supervisor a) to guide the Scholars in interdisciplinary research that requires more than one expert from other Department/ Centre of NITTTR Chennai or reputed Organisation; b) to take care of the administrative and research responsibilities of the Scholar, if the Supervisor retires from service.
16. Plagiarism - The practice of taking someone else's work or idea and passing them as one's own.
17. Programme - A higher education programme pursued for a degree specified by the Commission under sub-section (3) of section 22 of the UGC Act.
18. Publication - Full-length research articles reporting new research findings in respective fields comprising presentations on new concepts, and the development of innovative methods that include figures, tables, and references; the results of which have a general impact and contribute to the advancement of the particular field and are always peer-reviewed.
19. Research Advisory Panel - A Committee constituted by the Institute for each Scholar to monitor the progress of his/ her research work.
20. Research Proposal - A brief write-up giving an outline of the proposed research work which the Ph.D. Scholar shall submit along with the application for registration for Ph.D. programme.
21. Scholar - Any candidate admitted by the NITTTR Chennai for pursuing research for the award of Ph.D. degree of the NITTTR Chennai.
22. Specialization - The discipline of the Post Graduate Degree Programme.
23. Supervisor - Any faculty member of the NITTTR Chennai who has been recognized by the Institute to guide Research Scholars.
24. University - A Higher Educational Institution established or incorporated by or under a Central Act, a Provincial Act, or a State Act, and shall include any institution for higher education deemed to be a University under Section 3 of the Act.

***General Instructions:**

Documents submitted to the Centre for Academic Studies and Research, NITTTR Chennai duly signed by the Supervisor shall be forwarded by the Head of the Department/ Centre (signed and seal) of the Supervisor.

All meetings related to the Ph.D. procedures shall be conducted offline wherever possible. The first and second Research Advisory Panel Meetings, and Seminars can be conducted online. However, the Research Advisory Panel Meeting for Synopsis Submission and the Viva Voce Examination shall be conducted in the physical mode only.

All meetings shall be conducted on regular working days.

I. CRITERIA FOR ADMISSION

The following are eligible to seek admission to the Ph.D. Programme:

Candidates who have completed:

- 1.1 A 2-year/ 4- semester master's degree programme after a 4-year/ 8 semester Bachelor's degree programme or a 2 year/ 4 semester master's degree programme after a 3 year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or equivalent grade in a point scale wherever grading system is followed.
- 1.2 M.Phil. programme as per UGC Norms with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed.
- 1.3 Equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution.
- 1.4 Scientists/ Executives/ Officers working in Industries/ State/ National/ International Research Institutes/ Organizations having Bachelor's/ Master's Degree in the concerned discipline with a minimum of Four years of experience at the senior executive level and at least 55% marks/ 6.0 CGPA are eligible to register themselves for Executive Ph.D.
- 1.5 A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ ST/ OBC (non-creamy layer)/ Differently abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the commission from time to time.

2. EDUCATIONAL QUALIFICATIONS

- (i) Students with M.E./ M.Tech./ M.S. (By Research) in the relevant branch of Engineering or Technology or *B.E./ B.Tech. in the relevant branch of Engineering or Technology shall apply for **Ph.D. Degree in the Faculty of Engineering/ Technology.**
- (ii) Students with M.E./ M.Tech./ M.S. (By Research) in the relevant branch of Engineering/Technology or *B.E./ B.Tech. in the relevant branch of Engineering/Technology or MBA/ Post Graduate Diploma in Business Management or Administration awarded by Indian Institute of Management (IIM)/ M.S. (By Research) in Management Sciences/ CA/ ICWA or M.Sc./ M.S. (By Research) in the relevant branch of Science and Humanities/ MCA/ M.A. (English/ Communication/ Media / Journalism) shall apply for the **Ph.D. Degree in the Faculty of Education (Inter-Disciplinary).**
- (iii) Students with MBA/ Post Graduate Diploma in Business Management or Administration awarded by the Indian Institute of Management (IIM)/ M.S. (By Research) in Management/ CA/ ICWA shall apply for the **Ph.D. Degree in the Faculty of Management.**

* Applicable to Executive Ph.D.

3. MODES OF Ph.D. PROGRAMME

The Ph.D. programme is available in modes as: Full-time, Part-time and Executive Ph.D. Candidates who satisfy the eligibility criteria as in Clauses 1 & 2 are eligible to apply for Ph.D. Programme under any one of the modes. Candidates enrolled in research programs may be permitted to carry out the research at the Institute or Extension Centre.

3.1 Full-time Ph.D. Programme

- 3.1.1 Candidates with postgraduate degree.
- 3.1.2 A project staff who fulfils the selection criteria of the Ph.D. admission of the Institute and works in the State/ Central/ Quasi Government funded projects in the Departments/ Centres of NITTTR Chennai shall register for the research programme under the supervisorship of the Principal Investigator of such projects. Such Supervisors shall be regular teaching faculty and recognized Supervisors of NITTTR Chennai. The Scholar will be appointed in such a project for at least two years.
- 3.1.3 Teachers from technical institutions who are sponsored by AICTE under Quality Improvement Programme and who satisfy the eligibility conditions shall apply for Full-time mode only, in the specializations as notified in the AICTE guidelines.
- 3.1.4 Students who are selected at National level Fellowship programmes or by any recognized bodies and who satisfy the eligibility conditions as per the regulations shall apply for Full-time mode in the respective specialization.
- 3.1.5 Overseas students sponsored by the Government of India or their respective Government on any exchange programme and who satisfy the eligibility conditions as per the regulations shall apply for the Full-time mode in the respective Specialization.
- 3.1.6 Full-time Scholars shall mark their attendance on all working days at the Institute/Extension Centre.

3.2 Part-Time Ph.D. Programme

The following categories of candidates are eligible to apply under Part-time mode.

- 3.2.1 Teaching Faculty working full-time in recognized institutions of regulatory bodies and regular teaching faculty of Government/ Private Technical Institutions.
- 3.2.2 Candidates working in Organizations/ Industrial Units/ R&D Departments/ National Laboratories/ Units of Government/ Quasi Government or any other research laboratories to do research with the University and sponsored by the respective employer.
- 3.2.3 The Scholar shall complete a minimum of two course works at NITTTR Chennai in residential mode.
- 3.2.4 The nomenclature shall continue for the above Scholars till they are in service in the above Institutions.

3.3 Executive Ph.D. Programme

- 3.3.1 Executive Ph.D. is a non-residential doctoral programme designed for senior executives from various sectors who would like to carry out serious academic research without compromising on their ongoing professional pursuits.
- 3.3.2 Candidates working in Industrial Units/ R&D Departments/ National Laboratories/ Units of Government/ Quasi Government/ registered Public or Private Ltd. companies or any other research laboratories in India/ Defence or other Ministries of the Government of India or any other government organizations and sponsored by the respective employer.
- 3.3.3 Candidates applying based on Bachelor's/ Master's Degree in the concerned discipline shall have a minimum of Four years of experience at the senior executive level.
- 3.3.4 The executive Ph.D. candidates shall work on the research problem of their organizations with the faculty member of NITTTR Chennai, as a funded project.
- 3.3.5 The nomenclature shall continue for the above Scholars till they are in service in the above Institutions.
- 3.3.6 Candidates need to satisfy the selection criteria of the Ph.D. admission.

3.4 Change of Mode

The change of mode from (Full-time to Part-time and vice versa) shall be approved by the Director, subject to the submission of necessary documents along with the recommendation of the Research Advisory Panel Members. Change of Mode is permitted only for the Scholars who have completed the confirmation of registration.

4. TIMELINE

- 4.1 The timeline of the programme starts from the date of provisional registration and concludes at the time of submission of the Thesis.
- 4.2 The Ph.D. programme shall be for a minimum duration of three years, including course works, and a maximum duration of six years from the date of admission to the Ph.D. Programme.
- 4.3 A maximum of an additional two years can be given through a process of re-registration as per the regulations of NITTTR Chennai, however, that the total period for completion of a Ph.D. Programme shall not exceed eight years from the date of admission in the Ph.D. programme.
- 4.4 Provided further that, female Ph.D. Scholars and Persons with Disabilities (having more than 40% disability) may be allowed an additional relaxation of two years; however, the total period for completion of a Ph.D. programme in such cases shall not exceed ten years from the date of admission in the Ph.D. programme.
- 4.5 Female Ph.D. Scholars may be provided Maternity Leave/ Childcare Leave for up to 240 days in the entire duration of the Ph.D. programme.

- 4.6 The Director shall grant a break of study for the Scholar under extraordinary circumstances such as medical grounds and other compelling reasons which warrants his/ her absence from the programme. However, the break of study period shall not be counted for the minimum duration of the programme.
- 4.7 Break of study shall be granted to Scholars up to a maximum period of one year. Such requests with the recommendation of the Supervisor and Head of the Department/ Centre shall reach the Director before availing the break of study. If prior permission is not sought and obtained, it shall be considered as a case of discontinuation and action shall be taken to terminate the registration of such Scholars. The break of study period shall be counted for the maximum duration of the programme. The Scholar shall remit the semester fees during the break of study period.
- 4.8 Institute Fellowship shall be given up to a maximum of three years for the Scholars admitted under Full-time mode, subject to the fulfilment of the shortlisting criteria.

5. ADMISSION

- 5.1 The admission shall be based on the criteria notified by the institution, keeping in view the guidelines/ norms in this regard issued by the UGC and other statutory/ regulatory bodies concerned, and taking into account the reservation policy of the Central/ State Government from time to time.
- 5.2 The candidates desirous of registering for Ph.D. programme shall apply by filling in all the relevant details mentioned in the online application form available on the Institute website and submit online with the approval of the Supervisor on or before the due date as indicated in the notification issued from time to time. The Institute shall issue notification for Ph.D. admission twice every year.
- 5.3 Incomplete applications and applications with false information in any respect shall be summarily rejected without any intimation to the candidate.
- 5.4 Admission to the Ph.D. programme shall be made using the following process:
- i. NITTTR Chennai shall admit students through an Entrance Test conducted at the Institute. The Entrance Test syllabus shall consist of 50% of research methodology, and 50% shall be subject-specific.
 - ii. NITTTR Chennai shall admit students who qualify for fellowship/ scholarship in UGC- NET/ UGC- CSIR NET/ GATE/ CEED and similar National level tests based on an interview.
 - iii. Students who have secured 50% marks in the entrance test are eligible to be called for the interview.
 - iv. A relaxation of 5% marks shall be allowed in the entrance examination for the candidates belonging to SC/ ST/ OBC/ Differently abled category, Economically Weaker Section

- (EWS) and other categories of candidates as per the decision of the commission from time to time.
- v. NITTTR Chennai shall decide the number of eligible students to be called for an interview based on the number of Ph.D. seats available.
 - vi. A weightage of 70% for the entrance test and 30% for the performance in the interview shall be given.
- 5.5 The selected candidate shall be admitted for the Ph.D. programme in the respective Faculty based on his/ her Postgraduate qualification. The admission Committee constituted by the Director shall approve and recommend the shortlisted candidates for admission to the Ph.D. programme based on his/ her Postgraduate qualification/ research area in the appropriate specialization.
- 5.6 The session of provisional registration for the Ph.D. programme shall be either January or July of the year in which the candidate is admitted.
- 5.7 The selected candidates shall be provisionally registered for Ph.D. programme either in the current session in which the candidate is selected or in the subsequent session, failing of which shall lead to the termination of the candidature.
- 5.8 The Scholar, Supervisor, Joint Supervisor, Research Advisory Panel members and Examiners shall not be relatives to one another.

6. SUPERVISORSHIP NORMS

- 6.1 The applicant shall possess Ph.D. degree in the relevant area of research in which he/ she has carried out the research and the supervisorship shall be awarded in the same faculty in which the Ph.D. degree is awarded. Further, they shall guide in the interdisciplinary area of Engineering Education.
- 6.2 The regular Full-time faculty members working as Professor/ Associate Professor of the NITTTR Chennai with a Ph.D., and at least five SCI publications and regular faculty members working as Assistant Professors in NITTTR Chennai with a Ph.D., and at least three SCI publications shall be recognized as a Research Supervisor. A Patent granted is considered equivalent to one SCI journal publication.
- 6.3 With the prior approval from the Director and without any financial commitment from the Institute, the recognized Research Supervisors shall act as Joint Supervisors in INI/ CFTI/ Institutes with NIRF ranking up to 100 and faculty members from such institutions and other reputed Organisations/ Industries shall also be permitted to guide the Scholars as Joint Supervisors, subject to the fulfilment of the norms of Supervisor recognition of the Institute.

If the faculty member of NITTTR Chennai, as Joint Supervisor, is required to visit the host Institute/ Outside, he/ she shall seek specific approval for the visit on special casual leave/ casual

leave, from the Director. If the external Scholar wishes to avail of the facilities of the Institute, he/ she may be permitted for a period of six months with the prior approval obtained from the Director and paying the necessary fee as per the Institute norms.

- 6.4 Publications produced during the Ph.D. programme and after the completion of the Ph.D. programme shall be considered for processing the application.
- 6.5 If self-plagiarism/ plagiarism is ascertained in the publications of the applicant, the application shall be summarily rejected and the applicant shall not be permitted to apply for Supervisorship for the next two years.
- 6.6 The applicant who fulfils the norms shall be recognized as a Supervisor based on the recommendation of the Faculty Chairperson concerned and the approval of the Committee constituted by the Director.
- 6.7 For interdisciplinary research that requires more than one expert, the Joint Supervisor from other Departments/ Institutions/ Organisations (as per Clause 6.2) shall be approved by the Director based on the request of the Supervisor and the recommendation of the Heads of the Departments/ Centre of the Supervisor and the proposed Joint Supervisor, respectively.
- 6.8 A Supervisor shall entertain registration of new Scholars under his/ her supervision up to the age of 62. However, such faculty members shall continue to supervise Ph.D. Scholars who are already registered until superannuation and as a Joint Supervisor after superannuation.
- 6.9 Communication in any form with the Thesis examiners by the Supervisor/ Joint Supervisor/ Scholar after the submission of Synopsis/ Thesis of the Scholar in connection with the evaluation report or any violation of Ph.D. regulations by the Supervisor/ Joint Supervisor or plagiarism in the Thesis/ Journal publications of the Scholars shall lead to the withdrawal of the supervisorship either permanently or for a period of five years and he/ she shall be debarred from guiding the existing Scholars for any research programme in the Institute till such period.

7. CHANGE OF SUPERVISOR

- 7.1 When a Supervisor of a Scholar happens to be away from NITTTR Chennai for more than six months and up to a maximum of one year, he/ she shall continue to guide the Scholar, but a Supervisor-in-charge (recognized Supervisor of the Institute) shall be nominated by the Director based on the request of the Supervisor and/ other recommendation of the Head of the Department/ Centre of the Supervisor to take care of the administrative responsibilities of the Scholar. The nominated faculty member shall continue as Supervisor-in-charge until the Supervisor returns or for a maximum period of one year.
- 7.2 The Supervisor who retires from service shall continue to guide a Scholar already registered under his/ her guidance, provided the provisional registration of the Scholar is confirmed, and the Scholar submits the Thesis within one year from the date of his/ her superannuation/ leaves service based on his/ her written request. If the Scholar has not submitted the Thesis within one

- year, a Joint Supervisor/ a Research Coordinator shall be nominated by the Director based on the request of the Supervisor and/ or the recommendation of the Head of the Department/ Centre of the Supervisor.
- 7.3 When a Supervisor migrates to another institution/ organization, such Supervisor's recognition shall be cancelled. However,
- 7.3.1 If the Scholar has submitted Synopsis or Thesis under his/ her guideship, the Supervisor shall be permitted to continue to guide those Scholars to complete their research programme provided the Scholar submits the Thesis within one year from the date of migration of the Supervisor.
- 7.3.2 If the Scholar has completed the comprehensive examination, the Supervisor may be permitted to guide without any financial commitment to the Institute with a Joint Supervisor from the Institute.
- 7.3.3 In all other cases, a Supervisor shall be allotted by the Head of the Department/ Centre, based on the preferences of the Scholar and the recommendation of the Research Advisory Panel and Dean (Academic and Research) with the approval of the Director.
- 7.4 If the Scholar migrates to another University/ Institution/ Public Sector organization, such Scholar shall be permitted to continue the research in the Institute and permitted to submit the Thesis under the same Supervisor with the approval from the Director, provided his/ her provisional registration is confirmed. In all other cases, the registration of such a Scholar shall stand cancelled.
- 7.5 Change of Supervisor for a Research Scholar is permissible on valid grounds within the maximum period from the date of registration with the consent of both the present and proposed Supervisors. In case, the Scholar requests for a change of Supervisor without the consent of the Supervisor, the request shall be considered based on the recommendation of the Committee constituted by the Director. In such cases, the Committee's decision is final. If the change of Supervisor is approved, the Scholar has to work for a minimum of one year with the new Supervisor and Synopsis shall be accepted only when the Scholar has published at least one journal publication (as applicable) with the new Supervisor.
- 7.6 The change of Supervisor can be done only once during the entire duration of the program. Under extraordinary circumstances, further change in Supervisor shall be approved based on the recommendations from the Director.
- 7.7 If a Supervisor is deceased after the submission of the Thesis by his/ her Scholar, a Research Coordinator shall be nominated by the Director based on the recommendation from the Head of the Department/ Centre to discharge the responsibilities of the Supervisor.
- 7.8 All these requests shall be recommended and forwarded by the respective Head of the Department/ Centre of the initial Supervisor and Supervisor-in-charge.

8. SCHOLARS INTAKE LIMIT

- 8.1 Research Supervisors who are Professor, Associate Professor and Assistant Professor shall guide a maximum of 8, 6 and 4 Scholars, respectively, as Supervisor/ Joint Supervisor at any time.
- 8.2 Each Supervisor may guide up to two international Research Scholars on a supernumerary basis over and above the permitted number of Ph.D. Scholars.
- 8.3 At any point, the total number of Ph.D. Scholars under a faculty member, either as a Supervisor or a Joint Supervisor, shall not exceed the number prescribed in Clauses 8.1 and 8.2.

9. RESEARCH ADVISORY PANEL

- 9.1 There shall be a Research Advisory Panel (RAP) for every Scholar to monitor the progress of research work.
- 9.2 For every Scholar, the Supervisor shall furnish two panels of three each with a doctoral qualification in the field of proposed research, from the faculty members of the Institute and experts from other Universities / R&D Departments / National Laboratories/ any other research laboratories, from which two experts, one from each panel will be nominated for the Research Advisory Panel by the Faculty Chairperson concerned. The Joint Supervisor, if applicable, shall also be a member of the Committee. The Research Supervisor of the Ph.D. Scholar concerned shall be the Convener of this Panel.
- 9.3 Research Advisory Panel shall have the following responsibilities:
 - i. To review the research proposal and finalize the topic of research.
 - ii. To guide the Ph.D. Scholar in developing the study design and methodology of research and identify the course(s) that he/ she may have to do.
 - iii. To periodically review and assist in the progress of the research work of the Ph.D. Scholar.
- 9.4 Each semester, a Ph.D. Scholar shall appear before the Research Advisory Panel to make a presentation and submit a brief report on the progress of his/ her work for evaluation and further guidance.
- 9.5 In case the progress of the Ph.D. Scholar is unsatisfactory, the Research Advisory Panel shall record the reasons for the same and suggest corrective measures. If the Ph.D. Scholar fails to implement these corrective measures, the Research Advisory Panel may recommend, with specific reasons, the cancellation of the registration of the Ph.D. Scholar from the Ph.D. programme.
- 9.6 The Director shall permit a change of member in the Research Advisory Panel for the Scholar based on the request of the Supervisor, if he/ she is away from the place of work for more than one year/ deceased/ not responding to attend meetings. In all the above cases or any other compelling reasons, the Chairperson of the Faculty shall nominate an alternate Research Advisory Panel member from the panel furnished by the Supervisor.

10. PROGRESS-TRACKING NORMS

- 10.1 Commencing from the date of provisional registration till the submission of the thesis, all the Research Scholars shall submit the progress report and registration renewal form in the prescribed format duly signed by the Supervisor and Head of the Department/ Centre of the Supervisor and Head of the Department of the Part-time Scholar at least three weeks before the end of every semester, without which the Scholar shall not be permitted to pay the semester fee.
- 10.2 Fees shall be paid by the Scholars for every semester during the notified period till the submission of the Thesis. Any other fees as applicable shall be paid as notified from time to time.
- 10.3 A Scholar with a Master's degree in Engineering and Technology shall complete a minimum of four course works of 12 credits, with a Master's degree in Science/ Humanities/ Arts shall complete at least five course works of 15 credits, including "Research and Publication Ethics" and "Research Methodology" and SWAYAM courses as recommended by Research Advisory Panel. In the case of candidates with B.E./ B. Tech., a minimum of eight course works for 24 credits shall be completed.
- 10.4 All Ph.D. Scholars, irrespective of discipline shall be required to train in teaching/ education/ pedagogy/ writing related to their chosen Ph.D. subject during their doctoral period. Ph.D. Scholars may also be assigned 4-6 hours per week of teaching/ research assistantship for conducting tutorial or laboratory work and evaluations.
- 10.5 No change in the course works prescribed shall be made without the approval of the Research Advisory Panel and the changes if any, shall be informed to the Centre for Academic Studies and Research in advance after due approval from the Research Advisory Panel.
- 10.6 Regularly offered Postgraduate electives shall not be taken as Special Electives and the Scholar shall wait to undertake such course works when it is offered to the Postgraduate students in the Department.
- 10.7 The Scholars shall secure a CGPA of 7.0 in the course works in order to become eligible for comprehensive examination. The Scholar who fails to secure a CGPA of 7.0, shall undertake one more course works relevant to the area of research offered under any approved Master's programme of the Institute with the recommendation of the Research Advisory Panel or write the arrear examination (only once) from any one/ two of the course works undertaken, to improve the CGPA to 7.0 (Best four course works shall be considered if additional course works is undertaken). A pass in the Comprehensive Examination is required for confirmation of Ph.D. registration.
- 10.8 The prescribed course works shall normally be completed within two years from the date of provisional registration for the Scholars. A maximum of two attempts are permitted for the Scholars to pass the course works. If the Scholar fails to complete the confirmation of provisional registration within three years after his/ her registration for the Ph.D. programme, the registration of the Scholar shall stand cancelled.

- 10.9 On the successful completion of the prescribed course works and based on the grade sheet issued by the Controller of Examinations, the Comprehensive Examination can be conducted. In addition, the Scholar shall give a seminar on the research topic to demonstrate the background knowledge in the area of specialisation which shall also be open to all faculty members, Research Scholars and students. The Comprehensive Examination shall cover the topics in the specialization and allied areas. The result of the Comprehensive examination and the results of the course works shall be detailed in the minutes of the Research Advisory Panel and forwarded to the Dean (Academic and Research) for confirmation of the provisional registration and to proceed further with his/ her research, within two months from the date of the Comprehensive Examination held. The Confirmation shall be completed within six months from the date on which the results of all the prescribed course works are declared.
- 10.10 If the performance of the Scholar is not approved by the Research Advisory Panel based on the results of the Comprehensive Examination, a grace period of three months (within the maximum period of three years) shall be given and then at the end of which the Scholar shall be re-examined. If found fit, the Provisional Registration is confirmed, and the Scholar is permitted to proceed further with his/ her research work. Otherwise, the provisional registration granted to the Scholar shall be cancelled.
- 10.11 Upon satisfactory completion of confirmation of the provisional registration, the Scholar shall undertake research work.
- 10.12 Full-time research Scholars shall mark their attendance on all working days at the Institute on all working days. They are eligible for a total of 23 days leave in a calendar year, which they shall avail after obtaining permission from the Supervisor and Head of the Department/Centre. Any leave not availed shall lapse. However, those Scholars who are availing financial assistance from a funding agency shall be governed by the rules of the respective agency.
- 10.13 Under extraordinary circumstances such as medical grounds and other compelling reasons which warrant a Scholar to discontinue the Ph.D. programme, if he/ she had completed a minimum of eight Postgraduate level courses of 24 credits and provisional registration, with one publication in SCI/ SSCI journals or a Patent granted in the field of specialization (fulfilling the Clauses 11.1 and 11.2) may be permitted to submit the Synopsis. If the Research Advisory Panel approves the research work reported, the approved Synopsis shall be submitted along with a panel of four examiners from INIs/ CFTIs/ State Universities and reputed State/ Central Laboratories at the level of Associate Professor and above/ equivalent scientist grade with a minimum five years of post-Ph.D. experience with a fairly good publication record (H index). Viva Voce examination shall be conducted after evaluation of the Thesis by the panel consisting of the Supervisor, Joint Supervisor (if applicable), Thesis examiner and an expert from different recognized institutions within India approved by the Director to award M.Tech. (By Research) degree to the Scholar.

10.14 If any Scholar intends to obtain under another Faculty due to the multidisciplinary approach, such request shall be considered at the time of submission of the Synopsis and the recommendation of the Research Advisory Panel. Further, such requests shall be processed by the concerned Faculty Chairpersons based on the course works completed, publications and the domain of the research work and their recommendation shall be approved by the Director.

II. SYNOPSIS SUBMISSION

- 11.1 For submission of the Synopsis, the Scholars who had completed the confirmation of provisional registration of their Ph.D. shall make a presentation before the Research Advisory Panel about their research work followed by a seminar on the same which shall also be open to all faculty members, Research Scholars and students, and publication of two research papers in the SCI/SSCI journals in the field of specialization. However, a Scholar shall be permitted to submit the Synopsis three months before the completion of his/ her minimum duration, provided the Scholar has published a minimum of three research papers in SCI/SSCI journals in the field of specialization. The Scholar shall be the first author or second author (if the Supervisor/ Joint Supervisor is the first author) based on his/ her research work and specifically recommended by the Research Advisory Panel. The content of the published paper shall be within the scope of the Journal. Publications of the Scholars where an Undergraduate/ Postgraduate student/ any third person is a corresponding author/ First author shall not be considered for processing of his/ her Synopsis. Publications done in the Special Issues of Journal(s), Part of Collection, Short Communication, Short note/ Short paper and Letter shall not be accepted.
- 11.2 The Synopsis shall also be accepted only when the Scholar has been granted one examined standard patent granted based on his/ her research work. The filing date of the patent shall be after the date of provisional registration of the Ph.D. Programme. The names of the Scholar and the Supervisor shall feature in the patent in the first and second positions. The claimed patent in which more than one Scholar of the same Supervisor is/ are involved, the patent shall be considered only once for the submission of Synopsis. The Scholar shall not publish research articles with similar contents in part or full in more than one journal, which would result in Self Plagiarism.
- 11.3 The Synopsis shall be submitted, only if the Research Advisory Panel approves that the quality and quantity of research in the final Thesis are adequate for further evaluation.
- 11.4 The Scholar shall submit a copy of the Synopsis of his/ her research work prepared following the format and specification prescribed, to the Research Advisory Panel through the Supervisor and Joint Supervisor (if applicable) at the time of the Research Advisory Panel meeting. At the time of the Synopsis approval meeting of the Research Advisory Panel, the Scholar shall produce the completed first draft of the Thesis.

11.5 If the Research Advisory Panel approves the research work reported in the Synopsis the approved Synopsis shall be submitted along with a panel of eight examiners at the level of Associate Professor and above/ equivalent scientist grade with a minimum five years of post-Ph.D. experience with a fairly good publication record (H index). Out of the eight examiners, at least four examiners shall be from INIs/ CFTIs/ State Universities/ reputed State/ Central Laboratories and the remaining four examiners shall be from reputed institutions abroad.

12. THESIS SUBMISSION

12.1 Scholars in research programs at the Institute or Extension Centre shall meet these criteria to submit their thesis. Demonstrate original research through the thesis, uncovering new knowledge or techniques. The research shall significantly advance the understanding within the chosen field. The thesis should showcase the student's ability to conduct thorough and ongoing research. Organized and Scholarly Format: The thesis should be well-structured and written in a professional academic style.

12.2 Scholars shall ensure their thesis adheres to the university's prescribed formatting guidelines. The submission process involves uploading a softcopy in PDF format through the designated online portal. A hardcopy submission is only required after initial thesis acceptance, with a three-month deadline following approval by the Research Advisory Panel. Published journal articles from the research work shall be mentioned with volume and issue numbers. A separate hardcopy abstract (around 400 words in English) shall accompany the thesis. In exceptional circumstances, extension for thesis submission may be granted for a maximum of six months with prior Director approval, and applicable late fees shall apply.

12.3 Scholars shall submit a Certificate duly signed by the Scholar, Supervisor and Joint Supervisor (if applicable) as prescribed, to the effect that the Thesis is a record of original research work carried out by the Scholar and the work reported in the Thesis is not copied from other sources/ not submitted elsewhere for a degree or diploma. A plagiarism report of the Ph.D. Thesis shall also be attached.

12.4 The Thesis shall be examined to evaluate the overall structure, content, and quality of the presentation. Any discrepancies found should be corrected by the Scholar in consultation with the Supervisor. These corrections shall then be approved by the Director, and three copies of the revised Thesis shall be submitted. Additionally, a soft copy of the Thesis and an abstract in English shall be uploaded to the Institute's website.

12.5 In the case of Scholars who have committed the act of plagiarism in the Thesis/ Journal publication, his/ her Thesis/ degree shall be forfeited and his/her research registration shall be cancelled and also he/ she shall be debarred to register for any other programme in the Institute. If the plagiarism is observed at a later stage at any point in time, the Ph.D. Degree awarded to the Scholar shall be withdrawn.

13. THESIS EVALUATION

- 13.1 The Thesis shall be sent for evaluation to two external examiners (one from India and another from abroad) nominated by the Director from the panel of examiners recommended by the Research Advisory Panel. The Director, if necessary may also nominate the examiners from outside the panel.
 - 13.2 After a thorough evaluation of the thesis, one of the following recommendations can be made.
 - 13.2.1 Recommend the acceptance of the Thesis in the present form.
 - 13.2.2 Recommend the acceptance of the Thesis. However, the Scholar shall incorporate the corrections indicated in the detailed report and place the corrected copy to the Viva Voce Examination Board but the corrected Thesis need not be sent to the examiner.
 - 13.2.3 Defer the recommendation, allowing the Scholar to incorporate the suggested modifications into the Thesis. The revised Thesis, along with the Scholar's clarifications, shall then be sent to the respective examiner.
 - 13.2.4 Reject the Thesis for the reasons set out in the detailed report.
 - 13.3 The examiner shall also enclose a detailed report, indicating the standard attained in the case of 13.2.1, the nature of revision in the case of 13.2.2 & 13.2.3 and specific reasons in the case of 13.2.4.
 - 13.4 The thesis shall be provisionally accepted, only if both the examiners recommend it for the award of the degree. Before the thesis is submitted to the Viva Voce Examination Panel, any minor revision or modification suggested by the examiners shall be thoroughly checked and carried out.
 - 13.5 Based on the recommendations to revise and resubmit the Thesis, the Scholar shall be permitted to revise and resubmit the Thesis along with the resubmission fee within six months, failing which the revised Thesis shall not be accepted and his/ her registration shall stand cancelled. The revised Thesis shall be referred to the same examiner for his/ her final recommendation on the Thesis which shall be only either for recommendation for the award or for rejection.
 - 13.6 If one examiner recommends the award of the degree while the other recommends rejection, then the Thesis shall be referred to the third examiner to be nominated by the Director. If two of the three examiners recommend the award, the Thesis shall be provisionally accepted. If two of the examiners recommend rejection, the Thesis shall be rejected and the registration of the Scholar shall stand cancelled.
 - 13.7 If both the examiners recommend rejection, the Thesis shall be rejected and the registration of the Scholar shall stand cancelled.
 - 13.8 If the examiner has not recommended or insisted on sending the Thesis back to him/ her, the Thesis shall be referred to the Research Advisory Panel to ascertain the corrections carried out in the Thesis as suggested by the examiners.
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13.9 Any other cases not covered by the above Clauses shall be referred to the Director as a special case. If necessary, the Director, NITTTR Chennai shall refer to the Research Board which in turn shall refer to the Senate/ BoG, for necessary action.

14. VIVA VOCE EXAMINATION

14.1 The Viva Voce Examination of the Ph.D. Scholar to defend the Thesis shall be conducted, if both the external examiners recommend acceptance of the Thesis after incorporating any corrections suggested.

14.2 The Research Advisory Panel shall meet within three months of the report received date and recommend a panel of three experts from INIs/ CFTIs/ State Universities and reputed State/ Central Laboratories/ Technical Institutions (Associate Professor/Professor), along with their publication details including h-index in the last five years for constitution of a Viva Voce Examination Board. Every expert shall be from different Institutions. The Director nominates one member from the panel of experts recommended by the Research Advisory Panel. The Director, if deems it necessary shall nominate a member from outside the panel.

14.3 The Oral Examination Board shall be constituted by the Director as follows:

a.	Indian Examiner of the Thesis or an expert from the panel (in the absence of the former)	Member
b.	An expert from a recognized institution from the panel	Member
c.	Joint Supervisor of the Scholar, if applicable	Member
d.	Supervisor/ Research Coordinator of the Scholar, if applicable	Convener

14.4 The Viva Voce examination shall be conducted within three months from the date of issue of the Viva Voce examination board as an “Open Defence” Examination. The Viva Voce examination shall not be conducted on Saturday, Sunday and public holidays. The circular for the same shall be communicated to the Centre for Academic Studies and Research/ faculty members/ Research Scholars/ other departments/ other Institutions, at least three weeks in advance (for physical/ face-to-face mode) prior to the Viva Voce Examination. A minimum of ten members excluding the Viva Voce Examination Board members shall be present for the Viva Voce Examination.

14.5 Viva Voce Examination shall be held at NITTTR Chennai.

14.6 If the Oral Examination Board reports the performance of the Scholar as “not satisfactory” then he/ she may opt to reappear for the Viva Voce Examination at a later date (not later than three months from the date of the first Viva Voce Examination). On the second occasion, the Board shall include one more expert member nominated by the Director.

14.7 If the performance of the Scholar in the Viva Voce Examination in the second occasion also reported to be “not satisfactory”, the Director, if deemed necessary, shall refer the remarks of the

Viva Voce Examination Board, along with the Thesis and comments of the Examiners, to a Committee constituted by the Director, for this purpose and the decision of the Director shall be final.

- 14.8 Following the successful and satisfactory completion of the Viva Voce Examination, the Scholar shall upload the soft copy of the corrected Thesis following the prescribed format and specification, duly certified by the Supervisor and Joint Supervisor (if applicable), that all the corrections have been incorporated in the Thesis as suggested by the examiners.

15. Ph.D. DEGREE AWARD

If the report of the Oral Examination Board is satisfactory, the Scholar shall be awarded Ph.D. Degree based on the specialization in which he/ she got admission for Ph.D. programme, under the Faculty of Engineering & Technology/ Faculty of Education/ Faculty of Management with the approval of the Senate.

16. CANCELLATION OF REGISTRATION

- 16.1 The registration of a Scholar who has not submitted his/ her Thesis before the end of the maximum duration including the extension period for the programme as in Clause 4 shall stand cancelled automatically.
- 16.2 The registration is liable for termination administratively by the Dean (Academic and Research), Centre for Academic Studies and Research, if
- i. The semester fee was not paid within the prescribed time.
 - ii. Progress reports were not submitted or were not satisfactory for two semesters.
 - iii. The confirmation of provisional registration was not done beyond three years from the date of registration.
 - iv. The Research Advisory Panel finds the progress and performance inadequate.
 - v. Prior permission was not obtained for a break of study from the Dean (Academic and Research).
 - vi. The Scholar wishes to withdraw from the programme and submits a request.
 - vii. Extension of time (beyond six years) is not obtained as in Clause 4.
 - viii. Submission of Thesis beyond three months from the date of approval of Synopsis by the Research Advisory Panel.
 - ix. Submission of revised Thesis incorporating the suggestions of any examiner beyond six months.

In all the above termination cases, the fees paid by the Scholar shall not be refunded.

17. PUBLISHING THE THESIS

Following the successful completion of the evaluation process and before the announcement of the award of the Ph.D. degree(s), NITTTR Chennai shall submit an electronic copy of the Ph.D. Thesis to INFLIBNET, for hosting the same to make it accessible to all the Higher Educational Institutions and research institutions. Papers arising out of the Thesis may be published by the Scholar and the Supervisor. However, the Thesis as a whole shall be published by the Scholar and Supervisor after the award of the degree only with the approval of the Director.

18. POWER TO MODIFY

At any given time, the Senate/ BoG has the right to modify any of the above regulations from time to time towards the enhancement of the quality of research practices and the upholding of the reputation of NITTTR Chennai.

Note: The Scholar and the Supervisor shall be governed by the regulations as in force from time to time. The Supervisors and Scholars are requested to visit the NITTTR Chennai website for updates and announcements periodically.

Irrespective of the regulations in effect during the time of admission, the Scholar and Supervisor shall strictly adhere to the regulations and amendments as given by the Institute to ensure high-quality research. At the time of admission, each Scholar shall give an undertaking that he/ she shall abide by the Ph.D. regulations.