

# **Regulations for Doctor of Philosophy 2024**

(As per UGC Regulations 2022)

# NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH CHENNAI

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# NITTTR CHENNAI

## REGULATIONS FOR DOCTOR OF PHILOSOPHY – R 2024

### DEFINITIONS AND NOMENCLATURE

1. In the Regulations, unless the context otherwise requires,
2. “Act” means the University Grants Commission Act, 1956 (3 of 1956).
3. “Adjunct Faculty” means a part-time or contingent instructor, but not full-time faculty member hired to teach.
4. “Chairperson” means Head of the Faculty.
5. “Commission” means the University Grants Commission established under Section 4 of the UGC Act 1956.
6. “Course Work” means courses of study prescribed by the School/Department/ Centre to be undertaken by a student registered for the Ph.D. Degree.
7. “Credit” means the number of hours of instruction required per week over the duration of 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.
8. “Cumulative Grade Point Average (CGPA)” means 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.
9. “Degree” means a degree awarded by a NITTTR Chennai in accordance with the provisions of section 22 (3) of the Act.
10. “External examiner” means an academician/researcher with published research work who is not part of the NITTTR Chennai where the Ph.D. scholar has registered for the Ph.D. programme.
11. “Foreign Educational Institution” means—(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” means a numerical weight allotted to each letter grade on a 10-point scale.
13. “Guide/Research Supervisor” means an academician/researcher recognized by NITTTR Chennai to supervise the Ph.D. scholar for his/her research.
14. “Head of the Department” means Head of the Department of the Supervisor\*.
15. “Higher Educational Institution” means a university or institution specified under clause 2 of Regulation 1 of these Regulations.
16. “Interdisciplinary Research” means research conducted by a Ph.D. scholar in two or more academic disciplines.



17. "Joint Supervisor" means a recognized Supervisor to guide the scholars in interdisciplinary research that requires more than one expert or to take care of the administrative and research responsibilities of the scholar if the Supervisor retires from service.
18. "Plagiarism" means the practice of taking someone else's work or idea and passing them as one's own.
19. "Programme" means a higher education programme pursued for a degree specified by the Commission under sub-section (3) of section 22 of the Act.
20. "Prospectus" means any document, whether in print or otherwise, issued for providing fair and transparent information relating to a Higher Educational Institution and programmes, to the general public (including to those seeking admission in such Higher Educational Institutions) by the Higher Educational Institutions. "Publication" means full-length research articles reporting new research findings in respective fields comprising presentations on new concepts, 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.
21. "Research Advisory Committee" means a committee constituted by the University for each scholar to monitor the progress of his/her research work.
22. "Research Proposal" means 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.
23. "Scholar" means any candidate admitted by the NITTTR Chennai for pursuing research for the award of Ph.D. degree of the NITTTR Chennai.
24. "Specialization" means the discipline of the Post Graduate Degree Programme such as Environmental Engineering, Applied Electronics, Physics, etc.
25. "Supervisor" means any faculty member of the NITTTR Chennai who has been recognized by the University to guide the research scholars.
26. "University" means 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:**

All 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 included) where the Supervisor is associated.

All meetings related to the Ph.D. procedures shall be conducted offline wherever possible. The first and second Research Advisory Committee Meetings, Seminars shall be conducted online. However,



the Research Advisory Committee Meeting for Synopsis Submission and the Final Viva-Voce Examination **shall** be conducted in the physical mode only.

All meetings shall be conducted on regular working days.



## 1. GENERAL ELIGIBILITY

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 Candidates who seek admission after a 4 year/ 8 semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade on a point scale wherever the grading system is followed.
- 1.3 Candidates who have completed the 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.
- 1.4 Executives/ Scientists/ Scientific Officers working in State/ National/ International research institutes/ Organizations with a minimum of Three years of experience and at least 55% marks/ 6.0 CGPA in Bachelor's or Master's Degree in the concerned discipline 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

Programme		Qualification for Admission
(i)	Ph.D. Degree in Engineering/ Technology	M.E./M.Tech./M.S. (By Research) in the relevant branch of Engineering or Technology. B.E/ B.Tech. in the relevant branch of Engineering or Technology
(ii)	Ph.D. Degree in Engineering Education (Inter Disciplinary)	M.E./M.Tech./M.S. (By Research) in the relevant branch of Engineering or Technology. B.E/ B.Tech. in the relevant branch of Engineering or Technology MBA/ Post Graduate Diploma in Business Management or Administration awarded by Indian

Programme		Qualification for Admission
		Institute of Management (IIM)/ M.S. (By Research) in Management Sciences/ CA/ICWA M.Sc./ M.S. (By Research) in the relevant branch of Science and Humanities/ M.C.A/ M.A. (English/ Communication/ Mass Communication/ Journalism/ Media Arts)
(iii)	Ph.D. Degree in Science and Humanities	M.Sc./ M.S. (By Research) in the relevant branch of Science and Humanities/ M.C.A/ M.A. (English/ Communication/ Mass Communication/ Journalism/ Media Arts/ MSW)
(iv)	Ph.D. Degree in Management Sciences	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

### 3. Ph.D. PROGRAMME

Candidates shall Register for the Ph.D. Degree Programme in the Institute/ Extension centres coming under these regulations in any one of the categories. Three categories of Ph.D. programme available are: 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.

#### 3.1 Full-time Ph.D. Programme

3.1.1 Candidates under Full-time shall do research work in the Institute/ Extension centre shall be available during the working hours for curricular and related activities.

3.1.2 Candidates who clear the selection criteria of the Ph.D. admission of the Institute and working in the projects undertaken from State/ Central/ Quasi Government and fully funded projects in the Departments/ Centres of NITTTR Chennai shall register for the research programme under the supervision of the Principal Investigator of such projects. Such supervisors should be regular teaching faculty as well as recognized supervisors of NITTTR Chennai. The scholar should be appointed in a project sanctioned by a funding agency/organization at least for a period of two years.

3.1.3 Candidates who are sponsored by AICTE under Quality Improvement Programme for teachers of technical institutions and who satisfy the eligibility conditions shall



apply for Full-time category only, in the Specializations as notified in the AICTE guidelines.

3.1.4 Candidates 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 category in the respective Specialization.

3.1.5 Foreign Nationals 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 Full-time category in the respective Specialization.

3.1.6 Full-time scholars shall mark biometric attendance register on all working days at the respective place of research.

### **3.2 Part-Time Ph.D. Programme**

The following categories of candidates are eligible to apply under Part-time programme. Full-time teaching faculty working in recognized institution of regulatory bodies and regular teaching faculty of Government/ Private Technical Institutions. The nomenclature shall continue for the above scholars till they are in service in the above Institutions.

### **3.3 Executive Ph.D. Programme**

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 which are recognized by the Institute to do research with the Institute and sponsored by the respective employer. In general, the executive Ph.D. candidates shall work on the research problem of their organizations with the faculty member of NITTTR Chennai. The problem shall be worked with NITTTR Faculty Members as a funded project. The nomenclature shall continue for the above scholars till they are in service in the above Institutions.

### **3.4 Change of Category**

The change of category from (Full-time to Part-time and vice versa) shall be approved by the competent authority, subject to the submission of necessary documents along with the recommendation of the Research Advisory Committee Members. Change of Category is permitted only for the scholars who had completed the confirmation of registration.

## **4. DURATION OF THE PROGRAMME**

4.1 The Ph.D. programme shall be for a minimum duration of three (3) years, including course work, and a maximum duration of six (6) years from the date of admission to the Ph. D Programme.





- 4.2 A maximum of an additional two (2) years can be given through a process of re-registration as per the regulations of NITTTR Chennai; provided however, that the total period for completion of a Ph.D. Programme should not exceed eight (8) years from the date of admission in the Ph.D. programme.
- 4.3 Provided further that, female Ph.D. scholars and Persons with Disabilities (having more than 40% disability) may be allowed an additional relaxation of two (2) years; however, the total period for completion of a Ph.D. programme in such cases should not exceed ten (10) years from the date of admission in the Ph.D. programme.
- 4.4 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.

## **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 all the relevant details mentioned in the online application form available in 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. 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 methods:
- i. NITTTR Chennai admit students who qualify for fellowship/scholarship in UGC-NET/UGC- CSIR NET/GATE/CEED and similar National level tests based on an interview.
- and/or
- ii. NITTTR Chennai 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.
  - 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 will 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. Provided that for the selection of candidates based on the entrance test conducted by the HEI, a weightage of 70 % for the entrance test and 30 % for the performance in the interview/viva- voce shall be given.
- 5.5 The selected candidate shall be admitted for the Ph.D. programme in the respective Faculty based on his/her PG qualification. The admission committee constituted by the competent authority shall approve and recommend the shortlisted candidates for admission to the Ph.D. programme based on his/her PG 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 will lead to the cancellation of the candidature.
- 5.8 The Scholar, Supervisor, Joint Supervisor, Research Advisory Committee members and Examiners shall not be relatives to one another.

## **6. SUPERVISOR RECOGNITION**

Eligibility criteria to be a research supervisor, co-supervisor, number of Ph.D. scholars permissible per supervisor etc.,

- 6.1 The applicant should possess Ph.D. degree in the relevant area of research in which he/she has carried out the research and the supervisorship will be awarded in the same faculty in which his/her Ph.D. degree is awarded. In addition to the same faculty, they shall guide in the interdisciplinary area of Engineering Education.
- 6.2 Permanent faculty members working as Professor/Associate Professor of the NITTTR Chennai with a Ph.D., and at least five SCI publications and permanent faculty members working as Assistant Professors in NITTTR Chennai with a Ph.D., and at least three research SCI publications may be recognized as a Research Supervisor in the NITTTR Chennai. A Patent granted is considered equivalent to one SCI journal publication. The recognized research supervisors can only act as co-supervisors in INI/ CFTI/ Institutes with NIRF ranking up to 100 and faculty members from such institutions shall also be permitted to guide the scholars as co-supervisors.
- 6.3 Publications produced during the Ph.D. programme and after the completion of the Ph.D. programme shall be considered for processing the application.



- 6.4 If self-plagiarism/ plagiarism is ascertained in the publications of the applicant, the application will be summarily rejected, and the applicant will not be permitted to apply for Supervisorship for the next two years.
- 6.5 The applicant who fulfils the norms will be recognized as supervisor based on the recommendation of the Faculty Chairperson concerned and approval of the committee constituted by the competent authority.
- 6.6 For interdisciplinary research that requires more than one expert, the Joint Supervisor from other Departments/Institutions (as per clause 6.2) shall be approved by the competent authority 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.
- 6.7 A Supervisor shall entertain registration of new scholars under his/her supervision up to the age of 62. However, such faculty members can continue to supervise Ph.D. scholars who are already registered until superannuation and as a joint supervisor after superannuation.
- 6.8 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 shall lead to the withdrawal of the supervisorship for a period of five years and they shall be debarred from guiding the existing scholars in the Institute till such period.
- 6.9 Any violation of Ph.D. regulations by the Supervisor/Joint Supervisor shall lead to the withdrawal of the supervisorship either permanently or for a maximum period of five years and they shall be debarred from guiding the existing scholars 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 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 competent authority based on the request of the Supervisor and/ other recommendation of the Head of the Department of the Supervisor to take care of the administrative responsibilities of the Scholar. The nominated faculty member shall continue as Supervisor-in-charge until Supervisor returns or to a maximum period of one year.
- 7.2 All these requests should be recommended and forwarded by the respective HoD of the initial Supervisor and Supervisor-in-charge.
- 7.3 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 competent authority based on the request of the Supervisor and/or the recommendation of the Head of the Department of the Supervisor.

- 7.4 When a supervisor migrates to other institutions/organization, such Supervisor's recognition will be cancelled. If the scholar has submitted synopsis or thesis under their 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. A Research Coordinator is to be allocated for those Scholar(s) to discharge the following responsibility to
- i. arrange the Research Advisory Committee meetings.
  - ii. facilitate the scholar in preparing the synopsis and thesis.
  - iii. conduct the Viva-Voce examination.
- 7.5 The Research Coordinator is not entitled to take the credit of the Ph.D. degree of such scholar(s).
- 7.6 In all other cases, such supervisors shall continue to guide those scholars as a Joint supervisor only and a Supervisor from a recognized department of the institute shall be nominated by the competent authority based on the request of the previous Supervisor (present Joint supervisor) with the recommendation of the Head of the Department of the Supervisor to take care of the administrative and research responsibilities of the scholar.
- 7.7 If the Institution in which the scholar works becomes Private University, such scholar shall be permitted to continue their research work in the NITTTR Chennai and to submit the Thesis under the same Supervisor with the approval from the competent authority, provided his/her provisional registration is confirmed. Otherwise, their registration shall be cancelled.
- 7.8 If the scholar migrates to another University/ Institution/ Public sector organization, such scholar shall be permitted to continue the research work in the institute and permit to submit the thesis under the same Supervisor with the approval from the competent authority, provided his/her provisional registration is confirmed. In all other cases, the registration of such scholar shall stand cancelled.
- 7.9 Change of Supervisor for a research scholar shall be possible on valid reasons 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 new Supervisor.

- 7.10 The change of Supervisor can be done only once during the entire duration of the program. Under extraordinary circumstances, further change in Supervisor will be approved based on the recommendations from the Director.
- 7.11 If a supervisor deceased after the submission of thesis by his/ her scholar, a Research Coordinator shall be nominated by the competent authority based on the recommendation from the Head of the Department to discharge the responsibilities of the supervisor.

## **8. NUMBER OF SCHOLARS**

- 8.1 The Professor, who is a Supervisor, shall guide only a maximum of 11 scholars as Supervisor/ Joint Supervisor at any time. The Associate Professor, who is a Supervisor, shall guide only a maximum of 8 scholars and an Assistant Professor shall guide only a maximum of 5 scholars as Supervisor/ Joint Supervisor at any time.
- 8.2 Each supervisor can 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 co-supervisor, shall not exceed the number prescribed in clause 8.1 and 8.2.

## **9. COURSE WORKS**

- 9.1 A minimum of four course works of 12 credits, as per the credit requirement for the Ph.D. course works, including a "Research and Publication Ethics" course as notified by UGC vide D.O. No. F.1- 1/2018(Journal/CARE) in 2019 and a research methodology course. The Research Advisory Committee can also recommend institute recognized online courses such as SWAYAM as part of the credit requirements for the Ph.D. programme. In the case of candidates with B.E., / B. Tech., a minimum course works for 24 credits shall be completed. The course works credit requirement for different categories are given below:

- 9.1.1 In case of a Master's degree (Full Time - 2 years or equivalent) from any INI / CFTI / AICTE approved institutions, the candidate shall have to complete a total of 12 credits within two years from the date of admission.



<b>4 Courses – 12 Credits</b>	Level I	Level II
	Foundation Courses (Compulsory)	RAC Approved / Online Courses (Electives)
	1 Course	3 Courses
	3 credits	9 credits

9.1.2 In case of a Master's degree or equivalent in Economics, Commerce, Social Sciences, and Sciences from any recognized University/ Institution, the candidate will have to complete a total of 18 credits within two years from the date of admission.

<b>6 Courses – 18 Credits</b>	Level I	Level II
	Foundation Courses (Compulsory)	RAC Approved / Online Courses (Electives)
	2 Course	4 Courses
	6 credits	12 credits

9.1.3 In the case of Graduates having B.Tech. /B.E. or equivalent degree from INIs/CFTI / or other AICTE Approved Institutes, the candidate will have to complete a total of 24 credits within two years from the date of admission.

<b>8 Courses – 24 Credits</b>	Level I	Level II
	Foundation Courses (Compulsory)	RAC Approved / Online Courses (Electives)
	3 Course	5 Courses
	9 credits	15 credits

- 9.2 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.
- 9.3 No change in the course works prescribed shall be made without the approval of the Research Advisory Committee and if any change, the same should be informed to the Centre in advance after due approval from the Research Advisory Committee members.
- 9.4 The prescribed course works shall normally be completed within two years from the date of provisional registration for both Full-time and Part-time scholars. Maximum of two attempts are permitted for the scholar to pass the subject for both Part-time and Full-time scholars and the courses should be completed within three years from the date of Provisional Registration. 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.

- 9.5 Regularly offered PG electives shall not be taken as Special Elective and the scholar shall wait to undertake such course work when it is offered to the PG students in the Department.
- 9.6 The scholars shall secure a CGPA of 7.0 in the course works in order to become eligible for comprehension examination. The scholar who fails to secure a CGPA of 7.0, shall undertake one more course work relevant to the area of research offered under any approved PG programme of the institute with the recommendation of the Research Advisory Committee 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 work is undertaken). A pass in the Comprehensive Examination is required for confirmation of Ph.D. registration.
- 9.7 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. This must be within 6 months from the date on which the results of all the prescribed course works are declared. 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 Committee 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.
- 9.8 If the performance of the scholar is not approved by the Research Advisory Committee 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. RESEARCH ADVISORY COMMITTEE**

- 10.1 There shall be a Research Advisory Committee (RAC) for every scholar to monitor the progress of research work.
- 10.2 The Research Supervisor of the Ph.D. scholar concerned shall be the Convener of this committee, and this committee 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.
- 10.3 Each semester, a Ph.D. scholar shall appear before the Research Advisory Committee to make a presentation and submit a brief report on the progress of his/her work for evaluation and further guidance. The Research Advisory Committee shall submit its recommendations along with a copy of Ph.D. scholar's progress report to the institute. A copy of such recommendations shall also be provided to the Ph.D. scholar.
- 10.4 In case the progress of the Ph.D. scholar is unsatisfactory, the Research Advisory Committee 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 Committee may recommend, with specific reasons, the cancellation of the registration of the Ph.D. scholar from the Ph.D. programme.

## **11. EVALUATION AND ASSESSMENT METHODS**

- 11.1 Upon satisfactory completion of course works and obtaining the marks/grade prescribed in clause (9) of the above, the Ph.D. scholar shall undertake research work.
- 11.2 Before submitting the synopsis, the Ph.D. scholar shall make a presentation before the Research Advisory Committee followed by a seminar on the same which shall also be open to all faculty members, research scholars and students.

## **12. SUBMISSION OF SYNOPSIS**

- 12.1 Upon the completion of the course work requirement and confirmation, the scholar shall be permitted to submit the Synopsis only after obtaining the confirmation of provisional registration 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 (after obtaining confirmation) three months prior to 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 should 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 Committee. The content of the published paper should be within the scope of the Journal. Publications of the scholars where a UG / PG 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) are not accepted. Also, publications such as





Part of Collection, Short Communication, Short note/Short paper and Letter shall not be accepted.

- 12.2 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 should be after the date of provisional registration of the Ph.D. Programme. The names of the scholar and the supervisor should feature in the patent in the first and second position, respectively. 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.
- 12.3 The synopsis shall be accepted, only if the Research Advisory Committee approves the quality and quantity of research that appears in the final thesis is sufficient for further examination of the thesis.
- 12.4 The scholar shall submit a copy of the Synopsis of his/ her research work prepared in accordance with the format and specification prescribed, to the Research Advisory Committee through the Supervisor and Joint Supervisor (if applicable) at the time of Research Advisory Committee meeting. At the time of the Synopsis approval meeting of the Research Advisory Committee, the scholar should produce the completed first draft of the thesis.
- 12.5 If the Research Advisory Committee approves the research work reported in the Synopsis and 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 fairly good publication record (H index). Out of the eight examiners, at least four examiners shall be from IISc/ IITs/ ISER/ NITs/ State Universities/ Central Universities and reputed State/ Central Laboratories and the remaining four examiners should be from reputed institutions abroad.

### **13. SUBMISSION OF THESIS**

- 13.1 The Thesis shall report, in an organized and scholarly format, an account of original research work of the scholar leading to the discovery of new facts or techniques or correlation of facts already known (analytical, experimental, hardware oriented, etc.) and demonstrating a quality contribution to the advancement of knowledge as well as the scholar's ability to undertake sustained research.
- 13.2 The Thesis shall be prepared in accordance with the prescribed format and specification. One copy of thesis in PDF format should be uploaded. A hard copy shall be submitted only after the acceptance of Synopsis and within three months from the date of approval of the Synopsis by the Doctoral Committee. The journal publication made by the scholar



should contain the Volume and Issue number. Papers that are retracted during the time of thesis submission and scrutiny shall not be considered for the processing of the thesis. Along with the thesis one hard copy of the abstract of the Thesis in English (about 400 words) shall be submitted. Under extraordinary circumstances, submission of Thesis shall be permitted up to a maximum period of six months, with prior approval from the competent authority. In such cases, the late fee shall be paid as applicable.

- 13.3 The Thesis shall include a Certificate from 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.
- 13.4 The Thesis shall be scrutinized to assess the overall layout, contents and the quality of presentation of the Thesis. The deviation, if any, shall be rectified by the scholar in consultation with the Supervisor and the same shall be approved by the competent authority and three copies of the corrected thesis shall be submitted. Soft copy of the thesis, abstract of the Thesis in English shall be uploaded in the Institute website.
- 13.5 Research Scholars submitting their Ph.D. Thesis for scrutiny should also include a plagiarism report (first page only) of the thesis generated from the login of the respective Supervisors. In addition to this, the research papers published in the journal list available on the Institute website shall also be included. The research papers should be in chronological order of the date of publication. Each research paper should be printed back to back beginning on the right side with the actual page numbers of the journal. Following the List of Publications page, the full research papers should be included. The Thesis Plagiarism Report should be included finally.
- 13.6 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.
- 13.7 The Ph.D. thesis submitted by a Ph.D. scholar shall be evaluated by his/her Research Supervisor and at least two external examiners who are experts in the field and not in employment of the NITTTR Chennai. Such examiner(s) should be academics with a good record of scholarly publications in the field. Wherever possible, one of the external examiners should be chosen from outside India. The viva-voce board shall consist of the Research Supervisor and at least one of the two external examiners and may be conducted online. The viva-voce shall be open to the members of the Research Advisory Committee/faculty members/research scholars, and students.

## **14. THESIS EVALUATION**



- 14.1 The Thesis shall be referred to two examiners (one from India and another from abroad) nominated by the Director from the panel of examiners recommended by the Research Advisory Committee. The Director, if deems it necessary may also nominate the examiners from outside the panel.
- 14.2 The examiner shall include in his/her report an overall assessment placing the Thesis in any one of the following categories.
- 14.2.1 Recommend the acceptance of the Thesis in the present form.
- 14.2.2 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 Oral Examination Board but the corrected Thesis need not be sent to the examiner.
- 14.2.3 Defer the recommendation at this stage and the scholar shall incorporate the suggested modifications in the Thesis and the corrected Thesis along with the scholar's clarifications shall be sent to the respective examiner.
- 14.2.4 Reject the Thesis for the reasons set out in the detailed report.
- 14.3 The examiner shall also enclose a detailed report, indicating the standard attained in the case of 14.2.1, the nature of revision in the case of 14.2.2 & 14.2.3 and specific reasons in the case of 14.2.4.
- 14.4 If both the examiners recommended for the award of the degree, Thesis shall be provisionally accepted. Any minor revision, modification, etc., suggested by the examiners shall be carried out before the Oral Examination Board.
- 14.5 If any examiner recommends resubmission of the thesis after revision, 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.
- 14.6 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.
- 14.7 If both the examiners recommend rejection, the Thesis shall be rejected and the registration of the scholar shall stand cancelled.
- 14.8 In case, the examiner does not insist to send the Thesis back to him/her, the Thesis shall be referred to the Research Advisory Committee to ascertain the corrections carried out in the Thesis as suggested by the examiners.



14.9 Individual cases not covered by the above Clauses shall be referred to the Director. If deemed fit, the Director, NITTTR Chennai shall refer to the Research Board which in turn shall refer to the Senate / BoG, for necessary action.

## 15. ORAL EXAMINATION

15.1 The viva-voce 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 by them.

15.2 On receipt of the evaluation reports, the Research Advisory Committee shall meet within three months and recommend a panel of three experts from Central Universities/ Central Government Institutions/ Other State University Departments / Other State Govt. Institutions / Central / State Research Laboratories, Govt./ Govt. Aided Institution (should not be below the cadre of Associate Professor), along with their publication details in the last five years for constitution of an Oral Examination Board. No two experts shall be from the same Institution. The competent authority nominates one member from the panel of experts recommended by the Research Advisory Committee. The Director, if deems it necessary shall nominate a member from outside the panel.

15.3 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

15.4 The Oral examination shall be conducted within three months from date of issue of oral examination board as "Open Defence Type" Examination. The Oral examination should 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 Oral Examination Board members shall be present for the Viva-Voce Examination.

15.5 Viva-Voce Examination shall be held at NITTTR Chennai (HQ) or Extension Centre.

15.6 If the Oral Examination Board reports the performance of the scholar as "not satisfactory" then he/she may opt to reappear for the Oral Examination at a later date (not later than three months from the date of the first Oral Examination/ Viva Voce Examination). On



the second occasion, the Oral Examination Board shall include one more expert member nominated by the Director.

- 15.7 If the performance of the scholar in the Oral Examination in the second occasion also reported to be “not satisfactory”, the Director, if deemed necessary, shall refer the remarks of the Oral 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.
- 15.8 On satisfactory completion of the Viva-Voce Examination, the scholar shall upload the soft copy of the corrected Thesis in accordance with 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.
- 15.9 The NITTR Chennai shall complete the entire process of evaluating a Ph. D. thesis, including the declaration of the viva-voce result, within a period of six (6) months from the date of submission of the thesis.

## **16. AWARD OF Ph.D. DEGREE**

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 Management, Faculty of Education, with the approval of the Senate.

## **17. CANCELLATION OF REGISTRATION**

- 17.1 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 5 shall stand cancelled automatically.
- 17.2 The registration is liable for cancellation administratively by the Head, Centre for Academic Studies and Research, if
- i. The scholar has not paid the semester fees within the stipulated time.
  - ii. Two semesters progress reports are not submitted or not satisfactory.
  - iii. If the scholar fails to complete the confirmation of provisional registration beyond three years from the date of registration for the Ph.D. programme.
  - iv. The performance is not satisfactory to the Research Advisory Committee and accordingly recommended for cancellation.
  - v. Prior permission is not obtained for break of study from the Dean (Academic and Research).



- vi. The scholar wishes to withdraw from the programme and requests to cancel his/her registration.
- 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 Committee.
- ix. Submission of revised thesis incorporating the suggestions of any examiner beyond six months.

In all the above cancellation cases, the fees paid by the scholar shall not be refunded.

## **18. PUBLICATION OF 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 so as 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 Head, Centre for Academic Studies and Research.

## **19. POWER TO MODIFY**

Notwithstanding all that has been stated above, the senate has the right to modify any of the above regulation from time to time only with a valid reason for the enhancement of the quality of research practices and the betterment of the reputation of the 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, amendments as given by the institute in order to ensure high quality research. At the time of admission, each scholar must give an undertaking that he/she will abide by the Ph.D. regulations.

