

**ORDINANCES and
REGULATIONS**

for

Ph.D.

(Applicable for 2003 Admission Onwards)

(With amendments approved in the 24th meeting of the Senate)



NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

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ORDINANCES

- 0.1 A candidate who has qualified for the award of Master's Degree of National Institute of Technology Calicut or a recognized Institute or University in the discipline as prescribed in the regulations is eligible to apply for Ph.D. programme of this Institute.
- 0.2 The award of the Ph.D. Degree shall be in accordance with the respective regulations of the Senate of the Institute.
- 0.3 The award of the Ph.D. degree shall be made by the Institute on the recommendation of the Senate and with the approval of the Board of Governors of this Institute.

REGULATIONS

R.1 Educational Qualification

Masters Degree in appropriate branch of study with 60% marks (CGPA 6.5/10). For SC/ST , 50% marks (CGPA 5.5/10). Candidates of Masters degree in Science/Life sciences should have a valid GATE score or UGC/CSIR/NBHM fellowship tenable from current year or NET qualified in relevant areas. Candidates applying for part-time and external modes of registration do not require GATE score or UGC/CSIR Fellowship.

R.2 Eligibility

- a) A candidate who wishes to work for Ph.D. degree under fulltime/external registration/part time scheme should apply in the prescribed form on or before the due date fixed for the same.
- b) External candidates sponsored by and employed in reputed Research and Development organizations/National Laboratories/Industry having research and development facilities recognized by Department of Science and Technology or by the Senate of the National Institute of Technology Calicut on request by the Industry can apply for external registration. *Members of faculty and research staff under certain conditions (given later) of the Institute who wish to work on a part time basis for Ph.D. Degree should also apply in the prescribed form on or before the due dates to be announced normally twice every year.*
- (c) Part time candidates from outside the institute must be a full time/regular faculty of AICTE approved degree level engineering institutes or scientists /Engineers in organizations with minimum of 2 years experience at the time of admission and sponsored by the institute organization.
- (d) The maximum age for admission to Ph.D programme is 45 years for full time and 50 years for part time/external registration programme.

R.3 Interview and/or Test

- (a) Eligible candidates have to appear for a interview and /or test.
- (b) The chairman of the selection committee will recommend the list of selected candidates to the Chairperson (Admission) to complete admission formalities.

R.4 Admission

- a) Candidates whose selection is approved by Chairman, Senate will be admitted to Ph.D. programme after payment of prescribed fees.
- b) Ordinarily, a candidate is not eligible for re-registration for Ph.D. after cancellation of his/her earlier registration for any reason. However, based on the merits of the

individual case, and taking into consideration any special circumstances, a candidate may be considered for re-registration.

R. 5 Choice of Guide

- a) Allotment of research scholars to Guides will be made by the Head of the Department taking into consideration the preferences of the research scholars and Guides, with their consent obtained in writing.
- b) There shall not be more than two guides for a research scholar.

R.6 Guideship

1. All permanent faculty members of the institute with Ph.D qualification and a minimum of 3 years experience in NITC or other institution of National Importance are eligible to guide Ph.D students.
2. A permanent faculty member of the Institute with Ph.D degree but having less than 3 years experience in NITC can also be considered by the BPGS and recommended to the Senate for approval as research Guide, if the faculty member has 3 years of teaching experience outside the institute has successfully guided at least one Ph.D thesis or a minimum of 2 post graduate projects or published two papers in reputed International /National journals.
3. A permanent faculty member of the Institute with Ph.D degree, but having less than 3 years experience can also be considered by the BPGS and recommended to the Senate for approval as research Guide, if the faculty member has a minimum of 6 years of experience in Industry/R2D organisation and has published a minimum of 2 papers in reputed International/National Journals or having one patent in his/her name.
4. For induction of an individual from another institute as a co-guide of the research scholars at NITC also, any of the above condition should be satisfied in their respective institute. Further the senate should formally approve the individual as a recognized guide at NITC.
5. Notwithstanding what is stated above, the Chairman, Senate reserves the right to approve anyone as Research Guide, depending upon the merit of the case.

Continuance of guide ship of retired faculty members

1.
 - (i) When a faculty member, who has guided a candidate for 3 years, retires, he will be permitted to continue as guide on his written request, and will be invited for the DC meetings without any financial commitment to the Institute. But TA and DA, limited to II class AC train fare, will be paid within India to attend the synopsis meeting and the oral examination.
 - (ii) However, there will be a co-guide for taking care of administrative, and to some extent, the research responsibilities, of the scholar.
2.
 - (i) If a faculty member is to retire within 2 years, and if he is allowed to guide any scholar on his written request, another faculty member, who is not likely to retire within 2 years, will be nominated as one of the Guides of the scholar at the time to registration itself.
The retired faculty member will be informed of the DC meetings, and will be invited to attend the meetings without any financial commitment to the Institute.
 - (ii). However, the retired faculty members who continue to be guides will be paid TA/DA.
Limited to II Class AC train fare, within India, to attend the oral examination.
3. The CSIR and other Emeritus Fellows/Scientists who hold office at this Institute for a period of 3 years and more can take fresh students during their period of appointment

as Emeritus Scientists only with financial support from other sources along with another Guide who has at least 3 years service still left at the Institute.

4. (i) The induction of new guides after 3 to 4 years of registration of a research scholar will be considered by the Doctoral Committee in the office of the Dean, (PGS&R).
- (ii) The Guide-in-charge who acted for more than one year will be a special invitee/co-opted member of the Doctoral Committee when the original Guide takes over. The rest will be left to the discretion of the original Guide.

R.7 Change of Guide

The Doctoral Committee may permit a research scholar to change his/her Guide on valid reasons.

R.8 Doctoral Committee

The Head of the Department will intimate to the Academic Section the area of research, name(s) of the Guide(s) and a panel of names indicating the area of specialization of each faculty member for constitution of Doctoral Committee (DC) for each research scholar within 8 weeks of the date of joining of the research scholar.

- a) The following is the composition of the Doctoral Committee:
 - i) Chairman : Head of the Department (HOD)(If HOD happens to be the Guide of a scholar, the Senior most Professor/Faculty or previous HOD will be nominated by Chairman, Senate or his nominee)
 - ii) Member : Dean (PG Studies and Research)
 - iii) Member(s) : Research Guide or Guides
 - iv) Member : At least one faculty member of the Department nominated by the Chairman Senate or his nominee from the panel suggested by HOD
 - v) Members : One faculty member of allied departments nominated by the Chairman, Senate or his nominee from the suggested panel of names by HOD
 - vi) Member : An expert in the concerned area of research from any research and development organizations or educational institutions may be nominated to the Doctoral Committee by the Chairman Senate or his nominee from a panel submitted by HOD.

In case any member goes on long leave or resigns or retires from the Institute, the Chairman, Senate or his nominee will nominate another member on the suggestion of the Chairman, DC.

R.9 Registration

The Doctoral Committee will meet normally within a month of its being constituted, interview the research scholar, consider the proposed research topic, finalize the registration details for the PhD programme and prescribe the courses of study for the candidate.

R.10 Course Work

- a) The research scholars with Post Graduate Degree in Engineering should successfully complete 4 courses of 3 credits each (or a total of 12 credits minimum), those with

Masters Degree in Science/Humanities shall complete 5 courses (or a total of 15 credits minimum) prescribed by Doctoral Committee within the stipulated time..

- b) Courses may also be prescribed from among those offered by Departments other than that in which the research scholar is registered. No change in courses prescribed shall be made without the approval of the Doctoral Committee. It shall, however, be open to the Doctoral Committee to prescribe additional courses wherever found necessary.
- c) Courses completed after the date of registration will only count towards the requirements of award of Ph.D. Degree.
- d) Research scholars admitted to the programme shall obtain atleast a minimum of C grade in any individual course for successful completion of the course prescribed.
- e) PG level courses may also be prescribed to Ph.D. scholars irrespective of the departments they belong to and credit may be given as per usual evaluation procedure.
- f) If a research scholar obtains less than 'C' grade for any of the courses registered by him/her one more chance may be given to repeat the course under the recommendation of doctoral committee.

R.11 Progress Report

- a) A research scholar shall submit within two weeks before the end of each 12 month period from the date of registration up to first 3 years and before the end of each 6 months period beyond 3 years, a written report of work done by him/her in the prescribed proforma to the Guide who shall forward it to the Head of the Department with his remarks for consideration by the Doctoral Committee.
- b) A research scholar shall appear before the Doctoral Committee once every semester after the course work and comprehensive examination for progress evaluation. He/she is required to make a presentation of the progress of his/her work in the open meeting for which other faculty members and research scholars are also be invited.
- c) Progress evaluation meetings of the Doctoral Committee will be convened by the head of the Department twice in a year in April (for research scholars admitted in July semester) and in November (for research scholars admitted in January semester) to assess the progress in his/her research work and recommend renewal of scholarship/registration wherever applicable. If the progress of the research scholar is tardy, the Doctoral Committee shall record the reasons for tardiness, warn the research scholar and suggest corrective measures.
- d) The progress of the research scholar will be categorized as one of the following by the Doctoral Committee:

Excellent/Very Good/Good/Fair/Satisfactory/Unsatisfactory

The Progress report in the prescribed Performa is to be approved by the members of Doctoral Committee before transmission to Chairman, BPGS or Dean (PGS&R)

R.12 Comprehensive Examinations

- a) The Comprehensive examination can be in oral form or written form, but if the scholar fails to clear the comprehensive Examination in the first attempt, the second examination will be conducted in written form with a minimum of three hours duration.
- b) Comprehensive Examination will be conducted in the Department. The objective of Comprehensive Examination is to test the general capability of the research scholar and the breadth of his/her knowledge in his/her discipline and areas related to his/her field of research.

- c) The Department shall intimate to the research scholars sufficiently in advance the scope of written test and other relevant details.
- b) If the performance of any research scholar at the comprehensive examination is unsatisfactory he/she will be given one more opportunity to appear for the examination within six months of the first examination. The research scholar should successfully complete the Comprehensive examination latest by the end of fourth semester after registration to avoid cancellation of his/her PhD registration.
- c) A student can appear in the comprehensive examination only after he/she has completed the course requirements and satisfied the minimum specified CGPA.
- d) Students admitted with M.Sc./M.A/M.Phil. Degrees may appear in the comprehensive examination earliest at the end of the second semester, but must pass the same before the end of the fifth semester after their first registration. Students admitted with M.Tech. or equivalent degree may appear in the comprehensive examination earliest at the end of the first semester, but must pass the same before the end of the fourth semester after their first registration. The above time limits are excluding the period sanctioned for leave, if any.
- e) The Department will constitute a Committee each year to conduct the comprehensive examination. The Head of the Department will be the Chairman of the Committee. This committee will be representative, covering all research areas of the Department and also have two members from outside the Department nominated by the Chairman, Senate or his nominee. The Guide will also be a member of the Comprehensive Examination Committee of the research scholar. The Doctoral Committee members will also be invited for the Oral Examination. In addition, an external examiner, if an expert in the concerned field is not available within the Institute, may be appointed for the comprehensive examination. If appointed so, that examiner should be a senior faculty member in the rank of a Professor or Assistant Professor from higher institutes of learning such as IITs /NITs. When required, the Chairman Senate or Chairman BPGS will nominate the examiner from the panel of names submitted by the Head of the Department / Chairman Doctoral Committee of the scholar.

R.13 Renewal of Registration in each semester.

- a) All research scholars (Full-time, Part-time, and External Registration Scheme) are required to enroll in person each semester on the stipulated date till their submission of thesis.
- b) Late enrolment is permitted on payment of late enrolment fee as decided by the Dean (PGS&R).
- c) However, if enrolment is not done for a period of six months the registration will be cancelled administratively. If at all any requests come for the re-registration the same will be considered by DC with a readmission fee of Rs.2000/-.

R.14 Cancellation of Registration

- a) The registration of a research scholar whose progress is not satisfactory or who has not enrolled in person for any one semester is liable to be cancelled by the Doctoral Committee or by the Chairman, Senate or his nominee.
- b) The registration of a research scholar who has not submitted his/her thesis by the end of the extended period as provided in the Regulations will be cancelled administratively by the nominee of the Chairman, Senate (Dean PGS&R).

R.15 Part-Time Ph.D. Programme for employees of institute

- R.15.1 The Institute offers Ph.D. programmes under part time scheme for permanent employees and research staff of the Institute as given in R2(a) who are eligible for registration if they apply for the same at the normal time for admission with the recommendation of the Head of the department in which he/she is employed. Those who are working on research projects in the Institute *should have completed a period of not less than one year on the project and project*

should be in force for at least two more years. A certificate to this effect from the Principal Investigator/Head of the Department concerned should be attached to the application form.

- R.15.2 If an employee who has registered as a part time research scholar resigns his/her job before the minimum period required for the PhD work, his/her registration shall stand automatically cancelled. However, if he/she has completed the course work and comprehensive examination and the minimum period as required in R16, he/she can be allowed to continue the research work if the Doctoral Committee of the research scholar recommends the same.

R.16 Minimum Residential Requirement and Minimum Time for Submission

- a) The minimum period from the date of registration for Ph.D. Programme to the date of submission of Ph.D. thesis shall be 24 months for Full-time Research Scholars with Master's degree in Engineering and 36 months for Full-time Research Scholars with Master's degree in Science/Humanities.
- b) The minimum period from the date of registration for Ph.D. Programme to the date of submission of Ph.D. thesis shall be 36 months for Part-time Research Scholars with Master's degree in Engineering and 48 months for Part-time Research Scholars with Master's degree in Science/Humanities.
- c) The minimum residential requirement for those registered under part time/external registration scheme is one semester or the time registered for completing the course work which cannot be less than a semester.
- d) The minimum period from the date of registration for Ph.D programme to the date of Chairman of Ph.D thesis shall be 36 months (2009 December admission onwards) for all full time/part time /external registration candidates admitted to any branch of study.

R.17 Relief from Ph.D. programme to take up job:

Ph.D. Scholars who get appointment can get relief from the programme by keeping registration alive by paying necessary fees on the following conditions:

- a) Scholars, who take up jobs in organizations with R&D facilities, will be relieved on their request on the recommendations of DC, if they have completed their (i) minimum residential requirement; (ii) course work and (iv) comprehensive examination.
- b) The scholars, who take up jobs in organizations, which do not have R&D facilities and in Computer companies will be relieved on their request on the recommendation of DC, if they have completed (i) minimum residential requirement; (ii) Course work; (iv) Comprehensive examination and (v) at least 50 percent of his/her research work.
- c) The renewal of their registration for every year/semester will be considered only if the DC finds his/her progress to be satisfactory and recommends continuance of registration.

R.18 Maximum Duration of Programme

- a) Research Scholars under Full-time schemes should submit thesis within 5 years from the date of registration.
However, the BPGS may extend the period of submission of thesis by not more than 3 years on valid reasons and on the recommendation of the Doctoral Committee.
- b) Research Scholars under Part-time and External Registration Scheme should submit thesis within 7 years from the date of their registration.
However, the BPGS may extend the period of submission of the thesis by not more than 2 years on valid reasons and on the recommendation of the Doctoral Committee.

R.19 Change of Registration from Part-time to Full-time Programme and vice-versa.

- R19.1 A student admitted to part-time/external registration programme may be allowed change his/her registration to full-time studies at the beginning of a semester on the recommendation of Doctoral Committee and with the approval of BPGS. However, for determining the duration of the programme, one half of the period spent, as a part-time student, will be counted.

- R.19.2 Similarly, a student admitted to a full-time Ph.D. programme may be permitted to change to a part-time Ph.D. programme on a request from him/her provided:
- a) He/she has completed the course work, passed the comprehensive examination, given the preliminary pre Ph.D. seminar that is adjudged as satisfactory and completed the residence requirements.
 - b) Get the request endorsed by the Supervisor(s) and the Doctoral Committee.
 - c) Produce a no objection certificate from the Head of the Institution/Organization, which he/she proposes to join.

R.20 External Registration Scheme

- R 20.1 A candidate working in Research and Development Establishment with adequate research and library facilities may be considered for admission to Ph.D. programme provided that they satisfy the minimum eligibility conditions. There must be a competent person to supervise his work in that organization. The candidate should provide the Bio-data of the prospective supervisor. External Registration will be granted only when the Senate recognizes that the prospective supervisor has necessary academic qualification.
- R 20.2 The Departments will have to identify an internal guide to each of the candidates who would work under the External Registration Scheme. If suitable guide is not available in the Department, the External Registration to such a candidate will not be granted.
- R 20.3 It is for the BPGS to recommend to the Senate for approval, an organization for carrying out Ph.D. research in a specified area under the External Registration Scheme. An application for admission from a candidate working in the approved organization will be considered only if he/she wishes to work in the specified area recognized by NITC.

R.21 Leave Rules

- R.21.1 A student may be allowed casual leave up to 8 days per semester subject to the condition that such leave will not be allowed for longer than 5 days at a time. The casual leave cannot be combined with any other kind of leave other than the public holidays and casual leave cannot be carried over.
- R 21.2 A student may be allowed leave during any period of Institute's vacation or during the inter-semester recess up to a maximum of 10 days on the recommendation of the supervisor by Head of the Department. Such leave not availed in one semester may be carried over to the next semester. The accumulated leave is limited to a maximum of 15 days.
- R 21.3 Leave on medical grounds, duly supported by medical certificate may be granted to a student up to 7 days per semester.

R.22 Waiver Granted to Students with Advance Standing

On the recommendation of DC and approval of BPGS a student may be granted exemption up to 6 credits or two courses of 3 credits each from the minimum course credit requirements provided he/she has taken a Post Graduate degree from NITs/IITs/IISc, *the year of post graduation being not earlier than 5 years from the year of admission.* (from 2006 admissions)

R.23 Synopsis of Thesis

- a) On satisfactory completion of the prescribed courses and the comprehensive examination, the research scholar shall submit ten copies of the synopsis of his/her research work through the Guide and Head of the Department to the Academic Section for consideration of the Doctoral Committee. Research Scholars are required to give atleast two seminar talks on the topic of his/her research before submission of synopsis. The research scholar is free to publish the results of his/her research before submission of his/her thesis. A

research scholar is required to give at least one open seminar in each semester after the completion of coursework and comprehensive examination, which are to be completed within the stipulated time given in the regulations. Open seminars will be given after formal notice to all Departments so that any one interested will be able to attend the same. At the time of viva voce examination, the research scholar should have at least one paper accepted in a peer-reviewed/ refereed journal or patents registered. This rule will be applicable to all research scholars admitted in 2004 and further and for all candidates whose viva voce is arranged after 31st Aug 2007 irrespective of the year of admission or category such as full time/ part-time/ external.

- b) The research scholar should present the synopsis before the Doctoral Committee. The Doctoral Committee will, if it approves the work reported in the synopsis, permit the research scholar to submit the thesis and recommend a panel of atleast eight thesis examiners.

R.24 Submission of Thesis

- a) The research scholar shall, within three months of acceptance of the synopsis, submit four copies of thesis embodying the results of investigation, and also three copies of the Abstract of the thesis of about 400 words. On the recommendation of the Guide and Chairman, Doctoral Committee, an additional three months may be granted. However, DC can review the request for grant of time beyond the six months period, if the scholar makes an appeal with valid reasons, well before the prescribed due date. This exemption will not be applicable beyond the maximum duration of the programme of a research scholar as stipulated in the Regulations.
- b) The thesis submitted for the Ph.D. degree shall contain an account of the research work carried out by the scholar leading to the discovery of new facts or techniques or new correlation of facts already known (analytical and/or experimental and/or hardware oriented in nature), the work being of such quality that it makes a definite contribution to the advancement of knowledge.

R.25 Panel of Examiners

The thesis shall be referred to two examiners one from India and the other from outside the country chosen by the Chairman Senate or his nominee from among the panel of examiners recommended by the Doctoral Committee at its meeting to accept the synopsis of PhD work.

R.26 Thesis Report

- a) The examiner is expected to send the report on the thesis within two months from the date of receipt of the thesis.
- b) In case of undue delay in receiving the thesis report, the Chairman, Senate or his nominee shall appoint another examiner in his place for evaluating the thesis.
- c) If one of the two thesis examiners declares the thesis as not commended the thesis shall be referred to a third examiner from the panel for his evaluation.
- d) If an examiner suggests resubmission of the thesis, after revision, the research scholar will be allowed to resubmit the thesis within the time stipulated by the Doctoral Committee failing which the revised thesis will not be accepted and his/her registration will be cancelled.
- e) If two examiners, after referral to a third examiner, if necessary, report the thesis as not commended the matter will be referred to the Doctoral Committee and the Doctoral Committee can recommend resubmission of thesis after further research work of not less than one year. In the absence of such a recommendation the registration shall stand cancelled.
- g) If reports of two examiners after referral to a third examiner, if necessary, declare the thesis as 'commended' the Doctoral Committee will consider the reports and recommend for conduct of oral examination which will be conducted normally not earlier than two weeks from the date of constitution of the Oral Examination Board.

The Doctoral Committee will suggest a panel for nomination of one member for Oral Examination Board.

- h) In all other cases, not covered by the above Regulations the matter will be referred to the Doctoral Committee for consideration.

R.27 Oral Examination

- a) The following is the composition of the Oral Examination Board:
- i) Chairman :Head of the Department (If HOD happens to be the Guide, the senior most Professor/previous HOD)
 - ii) Member :The Examiner of the thesis from within the country or a specialist in the subject, nominated by the Chairman, Senate or his nominee from the panel of examiners approved by the Doctoral Committee
 - iii) Member :Guide(s) -
 - iv) Member : A Specialist either from the Institute or from the outside from the panel approved by the Doctoral Committee and nominated by the Chairman, Senate or his nominee

The Doctoral Committee members of the Research Scholar concerned will be invitees to the Oral Examination.

- a) The Oral Examination Board examines the scholar on his/her thesis work and evaluates his/her performance as satisfactory or otherwise. The Board ensures that the scholar answers satisfactorily the questions raised by the thesis examiner(s)
- b) If the report of the Oral Examination Board declares the performance of the research scholar is not satisfactory, he/she may be asked to reappear for oral examination at a later date (not earlier than a month and not later than six months from the date of the first oral examination). On the second occasion, the Oral Examination Board will also include the members of the Doctoral Committee.
- c) The Oral Examination Board may also recommend revision to be made in the final version of the thesis after taking into consideration suggestions of the examiners who evaluated the thesis and the discussion at the oral examination. The Chairman of the Oral Examination Board shall forward the thesis to the Academic Section certifying that the revisions recommended by the Oral Examination Board, if any, have been incorporated in the copy of the thesis along with the report of the Oral Examination Board.

R.28 Award of Ph.D. Degree

If the performance of the research scholar in the Oral Examination is satisfactory, he/she will be awarded Ph.D. degree on the recommendation of the Senate and with the approval of the Board of Governors of the Institute.

R.29 Power to Modify

Notwithstanding all that has been stated above, the Senate has the right to modify any of the above Regulations from time to time.