

National Institute of Foundry and Forge Technology
Hatia, Ranchi- 834 003 (Jharkhand)

REGULATIONS
FOR
Ph. D DEGREE IN ENGINEERING AND SCIENCE
(Effective from August 2018 onwards)



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National Institute of Foundry & Forge Technology Hatia, Ranchi- 834003

Regulations for PhD Degree in Engineering and Science

(Applicable for those admitted from August 2018 onwards)

1.0 INTRODUCTION

The National Institute of Foundry and Forge Technology (NIFFT), hereafter referred to as the Institute, offers doctoral research programmes leading to the award of Degree of Doctor of Philosophy (PhD) in Engineering and Science in the following departments:

- a) Department of Foundry Technology
- b) Department of Forge Technology
- c) Department of Manufacturing Engineering
- d) Department of Materials and Metallurgical Engineering
- e) Department of Applied Sciences and Humanities

2.0 ADMISSION

On the basis of overall academic performance, interview and/or written test, the Department Research Committee (DRC) will recommend the names of selected candidates along with the names of probable research supervisor(s) to the Central Selection Committee (CSC). The CSC makes the final selection. Reservation policy of the Govt. of India shall apply. The admission to PhD programmes shall be notified through advertisement and Institute website, indicating the total number of seats available.

2.1 Departmental Research Committee (DRC)

Head of the Department (HOD) concerned shall be the Chairman of Departmental Research Committee (DRC). All faculty members of concerned department possessing a PhD degree shall be the members of DRC. The Dean (Research & Consultancy) shall also be a member of DRC as a facilitator but not as a signatory.

2.2 Central Selection Committee (CSC)

The Director of the Institute shall be the Chairman of Central Selection Committee (CSC). The heads of all the departments and Dean (Research & Consultancy) shall be the members of CSC. The Assistant Registrar (Academic) shall be convener.

2.3 Status of Research Scholars

The candidates admitted to the PhD programmes, hereafter referred to as Research Scholars, will have one of the following status.

Full-time Research Scholars with Institute Scholarship
Full-time Research Scholars without Scholarship
Full-time Research Scholars sponsored by Industries
Part-time Research Scholars from Academic Institute/R&D Organization /Industry

2.4 Eligibility for Admission

- 2.4.1 The minimum educational qualification required for admission to PhD programmes in Engineering and Science is one of the following:
- (a) M. E./M. Tech. from a recognized institution or university in Mechanical, Metallurgy, Production, Chemical, Industrial Engineering and allied disciplines with at least 6.5 CGPA (or 60% marks) in aggregate.
 - (b) B.E. / B. Tech. or its equivalent, in Mechanical, Metallurgy, Production, Chemical, Industrial Engineering and allied disciplines from a recognized institution or university, with at least 8.0 CGPA (or 75% marks) in aggregate.
 - (c) M. Sc. Or equivalent from a recognized institution or university in relevant discipline with at least 6.5 CGPA (or 60% marks) in aggregate.
- 2.4.2 For candidates belonging to SC/ST category, a relaxation of 0.5 CGPA (or 5% marks) is allowed in the minimum requirement.
- 2.4.3 The faculty and staff members of the Institute, who satisfy the eligibility, criteria may be considered for admission to the PhD programme as Part-time Research Scholar subject to a no-objection certificate from the Institute. They shall work for their PhD programme while discharging their normal duties.
- 2.4.4 Apart from required qualifications and academic record, the research aptitude, ability to work in team, subject interest, availability of research supervisors and facilities available and research focus of the concerned department will be considered by the DRC while selecting the candidates.

2.5 Admission Procedure for full-time& Part Time Research Scholars

- 2.5.1 The applications received from the candidates for PhD programme shall be screened by Dean (Research & Consultancy). The shortlisted candidates will be informed by post and through Institute website about the date, time and venue for the admission test and/ or interview. The screened list and the applications of eligible candidates will be sent to the concerned departments through Assistant Registrar (Academic).
- 2.5.2 On the basis of overall academic performance, interview and/or written test, the DRC will recommended the names of candidates with probable research supervisor(s) to CSC.
- 2.5.3 The CSC will make the final selection and send the list of selected candidates to the Assistant Registrar (Academic). The Assistant Registrar (Academic) shall send the admission related instructions to the selected candidates by post and through the Institute website.
- 2.5.4 At the time of admission, the research scholars shall submit an undertaking that he/she would abide by the rules and regulations and codes of conduct of the Institute.

2.6 Additional requirements for Part-time Research Scholars from Academic Institute/R&D Organization /Industry

*2.6.1 Applications under this category, the applicant must be holding a regular position in other educational institutions / industries / research and development / consultancy organizations for at least two years in the present organization. The applicants must attach a **no objection certificate** with the application from the current employer for pursuing PhD at this Institute.*

2.6.2 These scholars will pay the semester fees, excluding the hostel fees, at par with regular scholars of the Institute.

2.6.3 These scholars are not entitled for any kind of regular accommodation in the campus.

3.0 RESEARCH SUPERVISORS

3.1 All supervisors of PhD programme shall be at least in the rank of Assistant Professor or equivalent having a PhD degree.

3.2 The maximum number of research scholars that one can supervise at any point of time is six, subject to further intimation, including the full-time and part-time research scholars.

3.3 There can be a maximum of two supervisors for a research scholar.

3.3.1 At least one supervisor shall be a regular faculty member of the Institute belonging to the department in which the research scholar will be registered.

3.3.2 *For full time research scholar the other supervisor may be from the same or other department of the Institute. For part time research scholar the other supervisor may be from the same or other department of the Institute or from other educational institutions / industries / research and development / consultancy organizations.*

3.4 Any change in supervisor shall have to approve by the CSC.

3.4.1 Change of supervisor, under exceptional circumstance, shall be permitted on the approval of CSC, subject to the recommendation of DRC, consent of the research scholar, the present supervisor and proposed supervisor.

3.4.2 When a supervisor leaves the Institute permanently or temporarily for a period exceeding on year, the CSC on the recommendation of DRC shall appoint a new supervisor for the research scholar before his/her departure.

3.4.3 When a supervisor leaves the Institute temporarily for a period of less than one year, then CSC on the recommendation of DRC may make alternative arrangements.

3.4.4 The CSC may consider continuation of the original supervisor on his/her return to the Institute as one of the supervisors, in case of clauses 3.3.2 and 3.3.

- 3.4.5 A supervisor after superannuation shall continue to act as supervisor. If the research scholar concerned has no other supervisor from the department in which he/she is registered, one more faculty member of that department shall be made as additional supervisor in consultation with the superannuating supervisor and research scholar.
- 3.5 The supervisor(s) shall finalize the research topic after discussion with the research scholar concerned.

4.0 RESEARCH EVALUATION COMMITTEE (REC)

The CSC will constitute a Research Evaluation Committee (REC) to each research scholar with the head of concerned department as Chairman and the supervisor(s) and three faculty members, nominated in consultation with the supervisor(s), as the members. The Dean (Research & Consultancy) shall also be a member of REC as a facilitator but not as a signatory.

5.0 REGISTRATION RULES

- 5.1 The research scholars shall submit a prescribed PhD registration form (available with Ranchi University) to Dean (Research& Consultancy) with all relevant documents, which shall be forwarded to the Director for permission to conduct a pre-registration seminar. After obtaining such permission, the Dean (Research& Consultancy) will conduct the pre-registration seminar through Assistant Registrar (Academic).
- 5.1.1 After favorable recommendation of the Research Evaluation Committee (REC) and subsequent approval of the Dean (Faculty of Engineering), Ranchi University, the completed registration form shall be submitted to Ranchi University along with prescribed registration fee.
- 5.1.2 Rules of Ranchi University for registration of a candidate shall be in-force.
- 5.2 Renewal of registration of a scholar for every year/semester will be subject to the favorable recommendations of the REC.
- 5.3 If the registration of a research scholar is cancelled due to any reason, he/she may get registered again by completing all similar formalities. In such he/she may be allowed to submit the thesis after two years from the date of the last registration.

6.0 COURSE WORK

- 6.1 Research scholars will take courses recommended by the supervisor(s) and approved by REC as a mandatory requirement. The list of course to be taken by the research scholar during a semester shall be sent to the Dean (Research& Consultancy).
- 6.1.1 Full-time research scholars with M. E. / M. Tech. /M.S/M. Sc. (NET/GATE qualified) or equivalent degree shall take a minimum of 15 credits and those having any other qualification shall take a minimum of 24 credits. Part-time research scholars (internal & external) shall take a minimum of 10 credits. In both cases (full time and part time), the research scholars must complete research methodology course. Minimum of 'C' grade in each course is essential.

- 6.1.2 If the grade obtained by a research scholar in any subject is below 'C', he/she has to repeat that subject and clear it with a grade not lower than 'C'.
- 6.1.3 In the event of failure to clear the prescribed course work in four semesters, the registration/admission of the research scholar will be cancelled.
- 6.1.4 Supervisor(s) may recommend more courses to be taken up the scholar, if needed.
- 6.1.5 Introduction of a (3-1-0) credit course 'Research Methodology'. This course is mandatory for all full time and part time research scholars. The content of the course is as follows:
- (1) Thinking process: Problem finding, Problem solving and creativity
 - (2) Literature review
 - (3) Communication skills
 - (4) Experimental skills
 - (5) Modeling skills
 - (6) Effective oral presentations
 - (7) Professional ethics
 - (8) Interpersonal skills, stress and time management
 - (9) Quantitative Methods & Computer Applications
- 6.2 The prescribed courses shall be postgraduate (M. Tech.) level courses of the Institute. The grade and corresponding grade points will be as per the M. Tech. regulations of the Institute. Special courses may be floated for research scholars after obtaining due approval from Academic Council.
- 6.3 Supervisor(s) shall forward the grades of the research scholar to REC and Dean (Research & Consultancy) at the each semester along with a report on the progress made by the research scholar.

7.0 MINIMUM RESIDENTIAL REQUIRMENT

- 7.1 For full time research scholars the minimum residential requirement at the Institute from the date of admission to the PhD programme shall be 24 months.
- 7.2 Withdrawal from the programme is permitted for a semester for reasons of ill health or other valid grounds by CSC only after due recommendation from REC.

8.0 ACCOMMODATION IN THE CAMPUS

- 8.1 Full-time research scholars will be provided accommodation in the Institute hostels.
- 8.2 Unfurnished family accommodation is available to married research scholars desirous of staying with the family as per the rules of the Institute. Such research scholars will have to apply to the Director through their research supervisor(s).
- 8.2.1 Unmarried research scholars are not eligible for family accommodation.

- 8.2.2 Only limited family accommodation is available in the campus for married research scholars. Hence, family accommodation cannot be claimed as a matter of right.
- 8.2.3 The accommodation provide to married research scholars may be withdrawn if they fail to live with their family their family.
- 8.2.4 The research scholars will have to pay appropriate rent and charges as per the rules.

9.0 RELIEF FROM PHD PROGRAMME TO TAKE UP JOB

- 9.1 Research scholars who got job offer can get relief from the programme, while keeping their registration alive on payment of requisite fees every semester.
- 9.2 Research scholars may be relieved on their request to take up jobs. Such requests will be entertained provided they have completed: (a) minimum residential requirement; (b) prescribed course work; and (c) pre-registration formalities. Recommendation of REC and approval of CSC are mandatory for relief.

10.0 MAXIMUM DURATION OF PROGRAMME

A candidate registered for Ph.D. shall have to submit the thesis as per the following schedule.

<i>Status of Research Scholars</i>	<i>Scholars with M.E./M.Tech./M.Sc. or equivalent</i>		<i>Scholars with B.E./B.Tech. or Equivalent</i>	
	<i>Minimum Duration</i>	<i>Maximum Duration</i>	<i>Minimum Duration</i>	<i>Maximum Duration</i>
<i>Full time research scholar</i>	<i>2 years</i>	<i>5 years</i>	<i>3 years</i>	<i>5 years</i>
<i>Part time research scholar</i>	<i>3 years</i>	<i>5 years</i>	<i>4 years</i>	<i>5 years</i>

11.0 WITHDRAWAL FROM THE PROGRAMME

A research scholar may be permitted by the CSC to withdraw from the programme for a semester or longer for reasons of ill health or other valid grounds when duly recommended by the DRC. Normally a scholar will be permitted to discontinue from the programme only for a maximum continuous period of two semesters.

12.0 CANCELLATION OF REGISTRATION

- 12.1 Based on adverse recommendation of DRC regarding the progress of research scholar, the CSC may cancel the registration of the research scholar.
- 12.2 The registration of a research scholar who has not submitted his/her thesis before the end of the maximum permissible period as in 9.0 will be cancelled.

13.0 SCHOLARSHIP

- 13.1 To be considered as full-time research scholar with scholarship, a valid GATE score/ NET qualification is mandatory for candidates not having M.E. / M. Tech. degree.
- 13.2 Only full-time research scholars with scholarship will get scholarship, for a maximum period of five years from the date of admission, at the rates in accordance with the directives from appropriate authorities. The scholarship shall be governed by the rules of MHRD and Institute.
- 13.2.1 Such research scholars shall apply for enhancement of scholarship at least one month before the completion of two years from the date of joining along with a summary of the progress of their work to Chairman, DRC through their supervisor(s). The recommendations of DRC will be forwarded to REC. Based on the recommendations of DRC, such research scholars will be asked to deliver a seminar before the REC.
- 13.2.2 Subject to favorable recommendation of REC, the research scholar will be eligible for enhanced scholarship after completion of two years from the date of joining.
- 13.2.3 In case recommendation of the REC is not favorable, the candidate may deliver a fresh seminar within three months from the previous one for consideration of enhancement in scholarship.
- 13.3 The full time research scholars shall be eligible for 30 days of leave in a calendar year, subject to approval of the supervisor and the head of the department. There shall be provision of maternity leave as per the norms of Government of India.
- 13.3.1 Any absence over and above the admissible leave prescribed above shall be without scholarship, which shall be deducted on a pro-rata basis for the days of such absence.
- 13.3.2 A research scholar may, on the recommendation of the supervisor and the head of the department, be granted leave without scholarship for a total period not exceeding three months, during the entire tenure of scholarship by the Dean (R & C).
- 13.3.3 Head of the Department will maintain an attendance register of the Institute research scholars registered in their Department. At the end of every month they will send a report of leave of all students to the Dean (Research & Consultancy).
- 13.3.4 Students continuously not signing in attendance register for more than 30 days (including Saturdays, Sundays and Public holidays) will be deemed to have discontinued the PhD programme and their names will automatically be removed from the register. This will be applicable even if they have been found to be attending the classes/laboratories without signing in the register.
- 13.4 A research scholar may be assigned academic responsibilities of up to eight hours per week including tutorial classes, laboratory demonstration work, conduct of seminar / symposia, examination duties, running and maintenance of equipment/computer as may be decided by the head of the department.

- 13.5 No research scholar shall be permitted to receive any emoluments, salary, stipend or any other scholarship/ assistantship of the Institute or of any external organization institution.

13.0 PROGRESS REPORT

- 14.1 A research scholar shall submit a written report in required format, annually for the first three years, and every six months thereafter. The report should be routed through the supervisor(s) and head of the department for consideration and review by REC.
- 14.2 Continuance of registration and award/continuance of scholarship will be based on the recommendation of the REC subject to final approval by CSC.
- 14.3 In case of part-time research scholars, the REC will pay particular attention to the quantum of effort put in by the scholar towards doctoral studies and progress. Inadequacy of effort/progress can be a reason for cancellation of registration.

15.0 DISCIPLINE

- 15.1 Every scholar is required to observe discipline and decorous behavior both inside and outside the campus and should not indulge in any activity, which will tend to bring down the reputation of the Institute.
- 15.2 Any act of indiscipline of a scholar reported to the Dean (R & C) will be referred to a Discipline and Welfare Committee nominated by the Director from time to time.
- 15.3 The committee will investigate the charges and will recommend suitable punishment if it finds the charges substantiated. Such recommendations will be considered by the Director, who will authorize the Dean (R & C) to take appropriate action.
- 15.4 The Dean (R & C) will report the action taken to the Director.
- 15.5 The scholar may go in for appeal to the Director, whose decision will be final.

16.0 USE OF POWERED VEHICLES

- 16.1 The scholars living in the Institute hostels are not allowed to use powered vehicles, namely two wheelers and four-wheelers.
- 16.1.1 Exemption may be allowed on written permission from the Dean (R & C) and Chief Hostel Warden, in case of persons with disabilities only.
- 16.1.2 Scholars living in the married scholar's accommodation are allowed to use powered vehicles, provided that the vehicle is registered in their name. However, they have to obtain prior permission in writing from the Dean (R & C).

16.2 One time excuse may be allowed for violation of 16.1 with a penalty of Rs. 1500.00. The name of such scholar and the registration number of the vehicle will be noted in the register.

16.2.1 If a scholar continues to use the same vehicle or different vehicle or the vehicle (in the register, vide 16.2) being used by any other scholar (even those residing in married scholar's accommodation) will lead to a penalty of Rs. 5000.00 for every instance.

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