

INDIAN STATISTICAL INSTITUTE

RULES AND REGULATIONS FOR REGISTRATION FOR A Ph.D. DEGREE AND FOR SUBMISSION AND EVALUATION OF A THESIS FOR THE AWARD OF THE Ph.D. DEGREE

The Indian Statistical Institute awards the degree of Doctor of Philosophy (Ph.D.) for original research contributions in one of the following five disciplines: **Statistics, Mathematics, Quantitative Economics, Computer Science and QROR (Quality, Reliability & Operations Research)**. For obtaining a Ph.D. degree of the Institute, it is necessary for a candidate to register himself/herself for a Ph.D. degree of the Institute *in a specific discipline* and subsequently to submit a thesis embodying his/her research work in partial fulfillment of the Ph.D. degree of the Institute in that specific discipline. At present, the Institute has five **Ph.D. & D.Sc. Committees**, one for each discipline, appointed by the Council of the Institute with the following responsibilities: (a) to decide on acceptance of applications of candidates seeking registration for a Ph.D. degree of the Institute, (b) to conduct evaluation of submitted theses, and (c) to recommend award of the Ph.D. degree to candidates on their successful completion of requirements for a Ph.D. degree.

Procedure for Registration for a Ph.D. Degree of the Indian Statistical Institute:

In order for any candidate to be eligible to submit a thesis to the Institute for a Ph.D. degree in any of the five disciplines, namely, Statistics, Mathematics, Quantitative Economics, Computer Science and QROR (Quality, Reliability & Operations Research), it is necessary for the candidate to first register himself/herself for a Ph.D. degree of the Institute in one of the above disciplines. The rules and regulations governing registration for a Ph.D. degree of the Institute are described below.

- A.** For a candidate attached to the Institute as a Research Fellow and seeking to obtain a Ph.D. degree of the Institute in one of the five disciplines as mentioned above, **the registration for a Ph.D. degree has to be completed within two years from the date of his/her joining the Institute as a Research Fellow**. This rule will apply to all Research Fellows, irrespective of the source of funding of the Fellowship (e.g., I.S.I., CSIR, NBHM, UGC, etc.). Continuation of the Fellowship beyond two years will be contingent upon getting registered for Ph.D. degree of the Institute within two years from the date of joining as a Research Fellow.

To register for a Ph.D. degree of the Institute, an application on the prescribed form should be submitted by the candidate to the Ph.D. & D.Sc. Committee of the Institute for the specific discipline, with a copy to the Dean of Studies. The prescribed application form may be obtained from the Convener of the Ph.D. & D.Sc. Committee or from the Dean's Office or may be directly downloaded from the Institute's website. In order to be eligible to apply for registration for a Ph.D. degree of the Institute, a candidate has to satisfy the following conditions:

(i) **Academic Qualifications:**

The candidate should possess at least one of the following degrees or diplomas awarded by the Institute:

M.Stat., M.Math., M.S.(QE), M.Tech.(CS), M.Tech.(QROR), Post Graduate Diploma, Two/Three Year Advanced Statistician's Diploma, Senior Diploma in Statistics.

OR

The candidate should possess a Master's degree of a recognized university/institution in a relevant subject (relevant to the discipline in which the candidate is seeking a Ph.D. degree)

[Note: For candidates determined to be **outstanding** by the relevant JRF selection committee, the above criteria may be relaxed to a Bachelor's degree of a recognized university/institution in a relevant subject.]

(ii) **Selection Test:**

The candidate should have been selected as a Junior Research Fellow of the Institute in the relevant discipline through the written selection test (with waiver as permissible) and interview conducted annually by the Institute. A candidate clearing the JRF Selection Test, but not availing of the institute's fellowship, has to get the registration within a period of 5 years from the date of Selection Test result.

OR

The candidate has been awarded a Junior Research Fellowship by NBHM or CSIR or UGC or ICMR or DST based on a nationally conducted written selection test and has subsequently been selected for admission to the Ph.D. programme of the institute, based on a separate written test followed by an interview conducted by the relevant JRF selection committee of the institute.

OR

The candidate has been awarded a foreign Research Fellowship and has subsequently been selected for admission to the Ph.D. programme of the institute, based on a separate written test followed by an interview conducted by the relevant JRF selection committee of the institute. [For such candidates, granting registration for a Ph.D. degree of the Institute will be subject to fulfillment of the existing norms laid down by the UGC for award of a Ph.D. degree.]

(iii) **Mandatory Coursework:**

In case a candidate has been awarded one of the following masters' degrees of the Institute in the First Division, the mandatory coursework requirement for Ph.D. registration at the Institute is automatically exempted, provided the candidate is applying for registration for a Ph.D. degree in a relevant discipline as listed in the table below.

Table I

<u>I.S.I. Degree Obtained</u>	<u>Discipline of Ph.D. Registration</u>
M.Stat.	Statistics
M.Math.	Mathematics
M.S.(QE)	Quantitative Economics
M.Tech.(CS)	Computer Science
M.Tech.(QROR)	Q R & O R

In all other cases, it is mandatory that at the time of applying for registration for a Ph.D. degree of the Institute, the candidate has successfully completed the **coursework requirement**, as certified by the relevant Research Fellows Advisory Committee (RFAC) of the Institute. [For details, please see the item '*Coursework*' below.]

(iv) **Thesis Supervisor:**

The candidate should already have a Ph.D. thesis supervisor assigned to him/her by the Dean of Studies, on recommendation of the relevant Research Fellows Advisory Committee. [For details, please see the item '*Thesis Supervisor*' below.]

(v) **Research Area:**

The candidate should have already identified the broad area of his/her research- work for the thesis and should submit, along with his/her Ph.D. registration application, a write-up on the research area to be pursued by him/her towards his/her Ph.D. thesis, duly forwarded by the Ph.D. thesis supervisor(s) and the Chair of the relevant RFAC.

Coursework: A candidate applying for registration for a Ph.D. degree of the Institute will be expected to possess a broad knowledge in the discipline in which he/she is seeking a Ph.D. degree. In order to ensure this, there will be a list of courses for each discipline in which the Institute offers a Ph.D. degree. **Subsequent to being admitted to the Ph.D. programme of the Institute and put under the supervision of an appropriate RFAC, each candidate, except those possessing an M.Math./ M.Stat./ M.S.(QE)/ M.Tech.(CS)/ M.Tech. (QROR) degree of the Institute with First Division and applying for registration for Ph.D. in a relevant discipline as listed in Table I, will be required to successfully complete at least five courses from the list of courses for the relevant discipline and should have satisfactory performance in each of the courses. The RFAC will advise a candidate on the courses to be taken by him/her. Depending on the knowledge-base of a candidate, the RFAC may waive all or some of the courses. However, in such cases, the candidate will have to take a comprehensive written test conducted by the RFAC for each of the courses for which waiver is sought, and the waiver(s) will have to be based on the performance of the candidate in the comprehensive test(s). When any candidate, other than those for whom mandatory coursework requirement is automatically exempted as described in (iii) above and in Table I, applies for registration for a Ph.D. degree, the RFAC will need to certify that the candidate has successfully completed the required coursework in the relevant discipline. **For candidates having an M.Math./ M.Stat./ M.S.(QE)/ M.Tech.(CS)/ M.Tech.(QROR) degree of the Institute with First Division and applying for registration for Ph.D. degree in a relevant discipline as given in Table I in (iii), such coursework completion certificates are not required.****

The list of courses may be modified appropriately from time to time.

Thesis Supervisor:¹

1. For each candidate seeking a PhD degree of the Institute, the Dean of Studies, on the recommendation of the relevant RFAC, will assign a thesis supervisor. Usually, the supervisor will be a faculty member of the Institute (a scientific worker of the Institute at the rank of an Assistant Professor, or equivalent, or above). Dean may assign a joint supervisor either from ISI or from other universities/institutes/research lab, if the RFAC so recommends. If a candidate and/or the supervisor, feels that such joint supervision is necessary for conducting his/her research, (s)he may apply to the concerned RFAC proposing the name and other details of the joint supervisor and justifying the need of such additional expertise.
2. In the case of joint supervision, at least one of the supervisors should be from ISI, and s(he) must have three or more years of service left. If both the

¹ As recommended by the Academic Council in its 59th meeting, held on September 1, 2014.

supervisors are from ISI, one of them must have three or more years of service left.

3. The request for joint supervision should be made to the concerned RFAC on or before the time of PhD registration of the candidate. Dean of Studies, in consultation with the concerned RFAC and/or PhD/DSc committee, may handle any other exceptions, if any, on case-by-case basis.

Discipline for the Ph.D. Registration: Since the Institute awards Ph.D. degrees in five different disciplines, namely **Statistics, Mathematics, Quantitative Economics, Computer Science and QROR (Quality, Reliability & Operations Research)**, a candidate seeking a Ph.D. degree of the Institute needs to register himself/herself for a Ph.D. degree **in one of the above five disciplines**. Depending on the discipline in which a candidate intends to seek a Ph.D. degree, he/she would normally be placed by the Dean of Studies under the charge of an appropriate RFAC and would be required, under the supervision of the RFAC, to fulfill the coursework requirements for the intended discipline of the Ph.D. degree. In case of Research Fellows, **the subject-area of his/her work for a Ph.D. degree can be any one of the above five, irrespective of the subject in which he/she passed a JRF Selection Test**. It may be noted that (a) Ph.D. research topics/problems are becoming increasingly inter-disciplinary and (b) the RFACs of the Institute are organized by Divisions/Units and not by disciplines. Therefore, if a candidate admitted as a Research Fellow in one discipline and placed under the supervision of an appropriate RFAC, proposes to work for a Ph.D. degree in a different discipline, then it will be the responsibility of the RFAC in charge to obtain the proposal from the candidate and get it evaluated by a committee of experts in the discipline in which the candidate proposes to work for a Ph.D. thesis. Such a committee must include among others, some experts in the discipline, who are also members of the relevant Ph.D. & D.Sc. Committee.

Note: For each of the five disciplines in which the Institute awards a Ph.D. degree, there is a list of courses. Any subsequent **proposals for updating the list** of courses for the different disciplines, by adding new courses or deleting existing courses, will **need approval of the Academic Council**.

B. A candidate, who is **not attached to the Institute as a Research Fellow** and seeks to obtain a Ph.D. degree of the Institute in one of the five disciplines as mentioned above, must first **submit a letter of intent to the Dean of Studies**, mentioning the discipline in which he/she seeks to obtain a Ph.D. degree. On receipt of such a letter of intent, the Dean of Studies will forward the application to the appropriate JRF Selection Committee. It will be for the JRF Selection Committee to decide whether to consider the candidature of such a candidate for admission to the Ph.D. programme

of the Institute. If the JRF Selection Committee decides to do so, then the candidate will have to appear for **a written test followed by an interview conducted by the JRF Selection Committee. Based on the performance in the written test and the interview, the candidate may be admitted to the Ph.D. programme of the Institute and assigned to an appropriate RFAC by the Dean of Studies. Within two years from this date of assignment, the candidate should register himself/herself for a Ph.D. degree** of the Institute. The procedure and the eligibility criteria for application for registration **are exactly the same as under paragraph A** above.

Submission of Ph.D. Thesis:

After having registered for a Ph.D. degree of the Institute in one of the five disciplines mentioned above, a candidate should submit a thesis to the relevant Ph.D. & D.Sc. Committee **within five years from the date of registration**, in partial fulfillment of the award of a Ph.D. degree.

Prior to the submission of his/her Ph.D. thesis to the relevant Ph.D. & D.Sc. Committee, a candidate will have to:

- (a) submit a synopsis of the thesis to the relevant RFAC,
- (b) deliver a public seminar, organized by the relevant RFAC, on the research work to be included in his/her Ph.D. thesis.

At the time of submission of the thesis together with a synopsis of the thesis to the relevant Ph.D. & D.Sc. Committee, a candidate must also submit to the Ph.D. & D.Sc. Committee, a certificate signed by the thesis supervisor(s), certifying that the candidate has delivered a public seminar and has satisfactorily answered questions raised in the seminar.

It is the responsibility of the concerned Ph.D. & D.Sc. Committee to consider getting the thesis evaluated by the thesis supervisor(s) and by two external examiners selected by the Ph.D. & D.Sc. Committee and to subsequently arrange for the viva voce examination. Based on reports of the thesis-examination and the viva-voce examination, the Ph.D. & D.Sc. Committee will decide on recommending award of the Ph.D. degree and forward its recommendation to the Dean of Studies.

In case a candidate fails to submit his/her Ph.D. thesis along with a synopsis within five years from the date of registration for a Ph.D. degree, the registration will stand cancelled. In such a case, the candidate will need to get himself/herself registered for the Ph.D. degree once again before he/she can submit the thesis. For fresh registration of such a candidate, **rules and regulations for Ph.D. registration as stated in paragraph B above will apply.**

