

REGULATIONS FOR PH.D. PROGRAMME

DESIGNATION OF THE DEGREE

The Ph.D. degree awarded shall be designated as Doctor of Philosophy of the National Brain Research Centre. The certificate shall indicate the title of the thesis.

ADVERTISEMENT/NOTIFICATION

The Ph.D course will commence in August every year. All vacant seats are advertised in national dailies and on the NBRC website (<http://www.nbrc.ac.in>).

ELIGIBILITY FOR APPLICATION FOR THE PH.D. COURSE

A candidate seeking admission to the course of study leading to the award of Doctor of Philosophy must possess at least one of the following qualifications, from a university recognized by the University Grants Commission

1. Candidates securing 55% throughout the academic career starting at 10th grade will be considered
2. Master's degree in any branch of Science such as Biology / Physics / Chemistry / Mathematics / Statistics / Computer Applications / Pharmacy / Veterinary Science / Psychology or equivalent.
3. Bachelor's degree in Engineering / Technology / Medicine or equivalent.
4. Master's degree in Engineering / Technology / Medicine or equivalent.
5. Candidates appearing for the final year of qualifying examination are eligible to apply.

Candidates who have qualified for JRF in CSIR / UGC / ICMR / ICCSR / DBT-JRF national or any other equivalent examination are exempted from appearing for the entrance test. They should apply with the proof of qualification. They may be called for the interview subject to fulfilling the other requirements.

REQUIREMENTS FOR ADMISSION OF FOREIGN NATIONALS

Foreign nationals seeking admission to NBRC must fulfill all the eligibility requirements for Ph.D. described above. In addition, they must satisfy all the conditions required by the University Grants Commission, Department of Biotechnology and Govt. of India.

METHOD OF SELECTION

Selection will be based on one or more interviews, which may be preceded by an entrance test.

RESEARCH TRAINING PROGRAMME

Candidates selected for Ph.D. will be provisionally admitted to the Ph.D. Course and will be assigned a faculty-in-charge. The student shall work under the supervision of the faculty member in-charge till the time a Research Supervisor is assigned. The Research Training Programme (RTP) will consist of coursework and a laboratory rotation programme.

COURSEWORK

Every research student shall undertake coursework and will have to satisfactorily complete courses as advised by the faculty-in-charge.

- a) The Research Training Programme for Ph.D. should be ordinarily completed within one year of joining NBRC. A further period of six months may be allowed with prior approval of the Chairman, Board of Studies. Any further delay is to be considered by the Board of Studies, on the merits of the case.
- b) Students should have a minimum attendance requirement of 75% in every course. Students who do not fulfill the mandatory requirement, will not be permitted to appear for the examination(final) in that subject, unless they repeat the course during subsequent year by fulfilling minimum attendance.
- c) Coursework will consist of a set of courses, prescribed by the Board of Studies and will be compulsory for every student who registers for Ph.D.
- d) For successful completion of the training programme, a candidate should obtain at least 50% of the aggregate marks in every course.
- e) If a candidate fails to obtain at least 50% marks in a course, he/she may be allowed to appear for a supplementary exam. If he/she fails in this exam he will be disqualified from the programme..
- f) If for some genuine reason(s), a student has to drop course(s) during the training programme he/she has to take the course when it is offered next within the following academic year, as recommended by Academic Committee and approved by Chairman, Board of Studies.
- g) Final examination paper at the end of each semester will be set by an examiner from a panel recommended by the Academic Committee and approved by the Chairman, Board of Studies. There will be a board of examiners consisting of the concerned course Instructor and 2 other faculty members of NBRC also recommended by Academic Committee and approved by the Chairman, Board of Studies for moderating the paper.
- h) Candidates may be permitted to register for courses over and above these prescribed courses on the specific recommendation of the Faculty-in-Charge.
- i) Candidates, who do not qualify in one or two courses, will be granted provisional registration till the time they appear and qualify in the next exam. If a candidate fails to obtain at least 50% marks in three or more courses he/she will not be allowed to register for Ph.D.

- j) If a candidate does not obtain 50% marks in all the courses in 2 attempts, he will not be allowed to register for Ph.D.
- k) A Comprehensive viva-voce will be held at the end of the course work which the students must pass. The students who failed twice in the comprehensive viva-voce will be disqualified from the programme. A student who failed in any subject in the coursework is not eligible for attending the comprehensive viva-voce.

ROTATION PROGRAMME

Ph.D students will undergo Lab-Rotation as per the syllabus. In one Semester the Ph.D students will undergo Lab-Rotation in one of the Systems Labs. In the 2nd Semester the students will undergo Lab-Rotation in one of the Molecular Labs. The students should submit a concise project report after the Rotation in each lab. Lab-Rotation will be followed by a viva-voce exam. Lab-Rotation is a part of the course work and qualifying it, in both the semesters, is mandatory. Any candidate failing in this Practicals / Lab-Rotation is required to repeat it as directed by the Lab-Supervisor concerned and qualify it. The student need not rotate the same lab.

CANDIDACY

After successful completion of course work and the rotation programme of the Research Training Programme, the Faculty-in-charge will present a report to the Board of Studies, which will confirm the candidacy of the student for Ph.D.

ACADEMIC COMMITTEE

Director shall appoint an Academic Committee consisting of four members of the NBRC faculty. Two of the committee members may be changed every year. This committee will look after the academic activities and advise the Director whenever necessary. Registrar is the ex-officio member and will coordinate the meetings of the Academic Committee.

APPOINTMENT OF RESEARCH SUPERVISOR & CO-SUPERVISOR

On successful completion of the course work, each student will be required to give 3 choices of the research supervisors in the order of their preference. The final assignment of the Research Supervisor will be done by the Director based on the candidate's research interests and the availability of space and requirements in the intended supervisor's laboratory. Decision of the Chairman, Board of Studies in this regard will be final.

In exceptional circumstances change of Research Supervisor may be permitted provided it is recommended by the Academic committee and approved by the Chairman, Board of Studies.

In case of protracted leave of absence of the Research Supervisor, the Co-Supervisor will take over the responsibilities of Research Supervisor.

DURATION OF THE PH.D. PROGRAMME

The duration of course will be the time period from registration for the Ph.D. programme as provided below to the submission of the thesis. The minimum period of registration in respect of all the candidates who are registered for Ph.D. shall be two years. In exceptional cases minimum registration period of two years can be modified by Chairman, Board of Studies. The maximum period of registration shall be five years, which may be extended, in exceptional cases by the Chairman, Board of Studies.

REGISTRATION

On successful completion of the Research Training Programme and the assignment of a research supervisor, the candidate shall be eligible to register for Ph.D with NBRC(Deemed University), which will be approved by Board of Studies.

FORMATION OF DOCTORAL COMMITTEE

Within six months of the candidates registration, the Research Supervisor of the candidate will recommend to the Chairman, Board of Studies, a panel of members for the Doctoral committee for the candidate. In addition to the Research Supervisor, the Doctoral committee shall include a co-supervisor and two other faculty members of NBRC. In addition, a maximum of one faculty member from other recognized teaching/research Institutions may be invited to be a part of the committee. The Doctoral Committee will monitor the progress of the student, approve the research proposal and also recommend the submission of thesis.

Change of Research Supervisor may be permitted provided it is recommended by the Doctoral committee of the candidate concerned and approved by the Chairman, Board of Studies. Such changes shall be allowed only in exceptional circumstances.

SUBMISSION OF RESEARCH PROPOSAL

After the Doctoral committee has been appointed by the Chairman, Board of Studies, the candidate shall prepare a detailed research plan stating his/her objectives and methodology to be employed.

The research proposal shall be submitted to the Doctoral committee within one year of registration and the committee together with the faculty of the Centre will recommend the feasibility of the research plan recommending modifications as they seem fit. The registration of Ph.D. of those candidates who do not submit the research proposal within 2 years of registration shall stand cancelled.

ASSESSMENT OF THE WORK OF THE CANDIDATES

- a) The progress of the candidate shall be periodically assessed by the Doctoral committee and a report submitted to the Institutional Ph.D Committee twice a year. The committee may decide to meet and report more frequently if there are any concerns about the candidates' progress.

- b) In case the Doctoral committee reports to the Board of Studies in two consecutive reports that the candidate's progress is unsatisfactory, the Chairman may then warn the candidate and give him/her one more chance to improve his/her work during the next six months. In case at the end of this period, the work of the candidate is still unsatisfactory, the candidate's registration will be cancelled.

THESIS AND EXAMINATIONS

- a) A thesis cannot be submitted without the express approval of the Research Supervisor/Co-Supervisor and the Doctoral committee.
- b) Each candidate for the award of the degree of Doctor of Philosophy shall submit five copies of his/her thesis. The Research Supervisor shall certify that the work done by the candidate is original and carried out at NBRC under his/her supervision with the counter signature of the Director of NBRC.
- c) The Research Supervisor in consultation with the Doctoral Committee shall suggest a panel of examiners to the Chairman, Board of Studies, one year before the expected date of submission of the thesis. The suggested panel should include eight examiners from institutions other than NBRC who, on the basis of their published work are leaders in the field of study undertaken by the candidate.
- d) The Chairman, Board of Studies shall appoint a board of three examiners for assessment of the thesis, from among the suggested panel. One of them shall be the Research Supervisor of the candidate, who shall act as the Chairman, Board of Examiners. In the absence of the Research Supervisor, the Co-Supervisor shall act as the Chairman, Board of Examiners. The other two will be external examiners from the panel of examiners as per (c) above.
- e) The title of thesis and synopsis should be submitted to the Doctoral Committee three months prior to submission of the thesis to the Board of examiners.
- f) If more than one examiner rejects the thesis, the case will be referred to the Arbitration Committee.
- g) The Ph.D Arbitration Committee shall consists of three members:
 - (i) a Faculty Member of NBRC(who is not a Member of the Doctoral Committee) duly nominated by Chairman, Board of studies. In case Chairman, Board of Studies happens to be the Supervisor of the student whose thesis has been rejected, Chairman, SAC, NBRC shall nominate the Faculty Member.
 - (ii) the respective Research Supervisor and
 - (iii) the Registrar, NBRC.This committee will discuss the case referred to it and give its recommendation to the Director.

- i) If a thesis is rejected by three or more examiners, it will stand rejected and shall not be referred to another examiner, or to the arbitration committee.
- l) If one or more examiner(s) recommend revision of thesis it may be revised with major or minor changes in the thesis. After modifications the resubmission shall be done within a period to be decided by the Chairman, Board of Studies, on the recommendation of the Doctoral committee.
- m) If a report from any of the external examiners is not received within three months, a copy of the thesis shall be sent to another examiner from amongst the approved panel.
- n) After the receipt of the satisfactory report on the thesis from all the examiners, the student will make a formal presentation of the thesis to the faculty and students of NBRC. This will be followed by a viva-voce examination which will be conducted by a board consisting of the Research Supervisor and *one of the external examiners.

* Under extraordinary circumstances where any of the external examiners cannot be present at the Viva-Voce examination, the Chairman of the Board of Studies may appoint another external substitute examiner from the panel recommended by the Doctoral Committee.

AWARD OF THE PH.D. DEGREE

After the candidate successfully completes the Viva-Voce examination and unanimous recommendation from the Board of Examiners, NBRC shall award the degree of Doctor of Philosophy (Ph.D.).