

S N BOSE NATIONAL CENTRE FOR BASIC SCIENCES



TERMS & CONDITIONS **[Post B.Sc Integrated Ph.D Programme, Post M.Sc Ph.D** **Programme and Research Project Fellowships]**

Academic & Students' Programme
Office of the Dean (Academic Programme)
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1. PREAMBLE

Satyendra Nath Bose National Centre for Basic Sciences (SNBNCBS) is a premier autonomous research organization funded by the Department of Science and Technology of the Government of India. The Centre, with its core faculty of about thirty members, is devoted to the following objectives.

- Foster, encourage and promote the growth of advanced studies in selected branches of basic sciences.
- Conduct original research in frontier areas of physical sciences and related fields, including challenging investigations that promote future applications.
- Provide a forum of personal contacts and intellectual interaction among scientists within the country and abroad.
- Train young scientist for research in the basic sciences.

In pursuance of these aims SNBNCBS plays an important role in coordinating the rich scientific tradition and creative resources existing in the region of Kolkata and its environs through many research institutes, universities and colleges to bring about a coherence and a 'synergy' in order to make available to young people and future scientists the teaching and research facilities of this area. As part of this commitment, national and international conferences are arranged and an active year-round visitors' programme is vigorously pursued.

Research work at SNBNCBS is carried out over a broad spectrum of multidisciplinary studies as well as some pure areas ranging from Nano Sciences, Material Sciences, Condensed Matter Sciences to High Energy Physics, Cosmology & Astrophysics; from Soft Condensed Matter and Complex systems to Quantum Optics & Laser Physics; from Mathematics and Mathematical Physics to Mesoscopic Systems, Chemical Physics and Biophysics. At present the Centre has four departments:- 1) Material Sciences 2) Theoretical Sciences 3) Astrophysics & Cosmology 4) Chemical Biological & Macromolecular Sciences. In addition it houses two sponsored units viz i) Unit for Nano Science & Technology (UNANST) and ii) Advanced Materials Research unit.

2. POST B SC. INTEGRATED RESEARCH (PBIR) PROGRAMME

- 1 Since August 2001, SNBNCBS has been conducting the Post B.Sc. Integrated Research (PBIR) Programme in Physical Sciences. The programme is meant for those students with special talent and motivation who wish to pursue research, teaching and development in areas coming under the purview of physical sciences, both experimental and theoretical.
- 2 The aim of this programme has been to admit a small number of specially talented and truly motivated students after their B.Sc./B.E./B.Tech. and gear them towards a Ph.D programme after a duration of formal courses. The distinctive features of this programme vis-à-vis Universities/Colleges are three-fold: i) the students benefit from learning in a research environment, being taught by practising scientists; ii) with limited size of the class individual attention is provided, with each course supplemented with tutorial, and iii) the students get a quicker start into research because the formal course-work is interleaved with research-oriented projects. No tuition fee is charged for this programme.

3 ADMISSION PROCEDURE:

Students who have completed B.Sc./B.E./B.Tech., with a minimum of 55% marks or equivalent, are eligible to apply, provided they have qualified in one of the nation-wide

screening tests mentioned below. Students who are in the final year of B.Sc./B.Tech., may also apply, but their selection will be subject to their eventually fulfilling the minimum eligibility criteria mentioned above. The nation-wide screening tests that are used by the Centre to shortlist candidates to be called for an interview for final selection to the PBIR programme in Physical Sciences are: i) Joint Entrance Screening Test (JEST) * which is conducted annually by a consortium of premier research institutes ii) National Graduate Physics Examination (NGPE) conducted by Indian Association for Physics Teachers (IAPT), and iii) IIT-JAM, conducted by all the IIT's together to select students for their Masters programmes.

(* look at SNBNCBS home page for more information about JEST)

4 COURSE-WORK, M Sc. and Ph D. DEGREES

2.4.1 The M.Sc. degrees are awarded after successful completion of two years of course work by the West Bengal University of Technology, which allows for flexibility in constantly evolving the syllabus content, an essential necessity in the rapidly changing scenario, which is the world of science and technology today.

2 The course work constituting the basic requirement for the M.Sc. degree will be spread over four semesters with sixteen effective working weeks in each semester and a summer session of two months after the first two semesters. To qualify for the M.Sc. degree the student has to get minimum marks/grade in each semester, as required by the degree awarding body.

3 In case a student has failed in a particular subject (got an 'F' grade) in any given semester, s/he will be allowed to take a repeat examination and the performance of the student in the repeat examination will be suitably represented [Pass (D or above)/Fail (F)] in the updated grade-sheet for that semester. If a student is unable to appear in the usual semester examination due to illness or due to some other tragic events, the actual grade, obtained in the repeat examination, will be directly incorporated in the updated grade-sheet. A student is allowed only one chance to appear for a repeat examination in any given subject. Thus a student getting an 'F' grade in a repeat examination is tantamount to her/his not having fulfilled the requirements for an M.Sc., and hence will have to leave the programme.

4 Further, the eligibility of a student to appear for the end-semester/repeat examination in any given semester is not automatic. Towards the end of each semester SNBNCBS forwards a list to the University of students who would be appearing for either the regular or repeat examinations in various subjects. Students who do not satisfy requirements stipulated by SNBNCBS as regards attendance in classes, and/or who

indulge in any behavior deemed violative of the code of conduct, may not have their names forwarded to the degree granting university for the concerned examinations.

- 5 Additionally, as this is an integrated research programme and the centre pays a stipend to all the students, the Centre has additional requirements as regards the continuability of a student in the programme, and certain measures to encourage and ensure optimal performance of the students. To this end, SNBNCBS carries out a continuous assessment of a student's performance through each semester cumulatively upto the end of the 4th semester. A student who has accumulated an equivalent of 2 'F' grades or more but less than 3 'F' grades (a 'D' grade being taken equivalent to one-half of an 'F' grade and a 'C' grade equivalent to one-third of an 'F' grade) will be eligible to appear for the end-semester examination but will have his/her stipend discontinued till the completion of the M.Sc. programme. Upon accumulating an equivalent of 3 'F' grades or more in total, the student would be disqualified from appearing at the end-semester examination, and such a student will have to leave the programme.
- 6 SNBNCBS conducts a candidacy examination at the end of the 4 semesters of course work to ascertain the suitability or otherwise of students who have fulfilled requirements for an M Sc degree to continue for the Ph.D programme as a Junior Research Fellow (JRF). Only those students who have passed the candidacy examination will be allowed to register for the Ph.D degree. A student who, during the course work, had accumulated the equivalent of 2 'F' grades or more but less than 3 'F' grades, will have to appear at an additional interview after all the 'F' grades have been cleared by repeat examinations. Students who join as JRF will be assigned a research Supervisor/Supervisors from the Centre. A Co-supervisor from outside the Centre may be assigned depending on the nature of their problem and on recommendations of the Thesis Committee.
- 7 All JRFs and SRFs submit a monthly work report signed by the supervisor to obtain their fellowship.
- 8 At present the student can submit their Ph D. thesis to the Jadavpur University, the University of Calcutta, and the West Bengal University of Technology, or any other university that would allow such submission.

3. **POST-M SC. PH D PROGRAMME**

SNBNCBS also runs a Post M.Sc. Ph.D Programme where students who have completed M Sc or an equivalent degree are directly admitted.

1 **ADMISSION PROCEDURE:**

- 1 Students who have completed M.Sc. or an equivalent degree with a minimum of 55% marks or equivalent are eligible to apply provided they have qualified in the Joint Entrance Screening Test (JEST). The rank in JEST is used by the Centre to short-list candidates to be called for an interview for final selection to the Post-M.Sc. Ph.D programme. Students who are in the final year of M Sc may also apply, but their selection will be subject to their eventually fulfilling the minimum eligibility criteria mentioned above.
- 2 Additionally, candidates who have obtained a NET (UGC/CSIR) fellowship will be eligible to apply even without going through the JEST screening test. Their application should accompany a copy of their NET certificate. The interviews for selection of such students to the Post-M.Sc. Ph.D programme are conducted simultaneously with those of all other students who are short-listed to be interviewed for this programme. For the purpose of acting as the host Institution, SNBNCBS shall verify the antecedents of the applicants before the final selection is made. As per rules, the fellowship for these students is to be obtained from UGC/CSIR. SNBNCBS may make Mid-Term Admission also for such candidates.
- 3 Students who are in the final year of M.Sc. may be selected for the Post-M.Sc. Ph.D programme. But their selection will be subject to their eventually fulfilling the minimum eligibility criteria mentioned above.

(* Please see SNBNCBS homepage for more information about JEST)

- 4 No tuition fee is charged for this programme.

2 **COURSE-WORK, and Ph D DEGREE**

- 1 Within two weeks after joining post the M.Sc. Ph.D. programme, the students (designated M-JRF) will have to choose their Ph.D. supervisor, and begin their work on a project as advised by the supervisor concerned.
- 2 The M-JRF students are also required to go through the course work for two semesters. The choice of courses will be from those that may be offered in SNBNCBS during such semesters, and on the advice of the concerned supervisor. Some of these courses may run jointly with the PBIR students (3rd and 4th semesters).
- 3 Although the M-JRF students have already chosen a supervisor, and perhaps, a thesis topic too, their continuance in the Post-M. Sc. Ph.D. programme is strictly subject to their successfully completing the two-semester course work, i.e., they have to pass all the end-semester examinations. The rules and regulations regarding repeat examinations, discontinuance of fellowship after accumulating an equivalent of 2 'F' grades and less than 3 'F' grades, exit from the programme upon accumulating 3 'F' grades or more, are exactly as in the case of the PBIR students mentioned above. (see Section 2.4.3 & 2.4.5)

4 All JRFs and SRFs should submit a one-page report on the prescribed format duly signed by their supervisors/HoDs/Dean(AP) for obtaining the fellowship by the 20th day of every month at the Office of the Academic & Students' Programme Division.

4. **HOSTEL ACCOMMODATION:**

1 Residence in the hostel within the SNBNCBS campus is mandatory (barring special cases) to enable concentrated study and interaction. Until SNBNCBS becomes fully equipped to house all students on campus, if and when necessary, some students may be accommodated in off-campus rented apartments in Salt Lake area. Transports are provided for bringing students from off campus housing to the Centre.

2 Students are expected to occupy accommodation allotted to them before the start of the session.

3 An amount of Rs 3000.00 will have to be deposited as Security Deposit for Hostel Accommodation. This will be returned upon completion of the tenure or in the case of resignation.

4 The Canteen is located on the campus.

5 PBIR students currently pay Rs 1000 as hostel charges, which may change from time to time.

4 **STIPEND AND TENURE:**

1 PBIR Students:

1 The stipend of PBIR students for the first two years will be Rs. 9000/- per month at the existing rate, or as to be declared from time to time.

2 After a PBIR student clears the candidacy test, the student becomes a research fellow (now designated PBIR-JRF) and gets a monthly fellowship @ Rs 12,000/- (or as to be declared from time to time)at par with other JRFs for a period of two years.

2 Applicable to PBIR-JRF as well as M-JRF students.

1 On completion of two years as PBIR-JRF or M-JRF, the fellowship may be increased as per rules to Rs. 14,000/- (or as to be declared from time to time) per month. Henceforth, the student will be designated as PBIR-SRF or M-SRF respectively for the 3rd year. The same amount of fellowship will continue for the 4th and 5th years.

5.2.2 The upgradation of the fellowship from PBIR-JRF to PBIR-SRF (or M-JRF to M-SRF) is based on the recommendation of a committee that will assess the research performance of

the student during the first two years. In the event of the assessment committee not finding the progress/performance of the PBIR-JRF/M-JRF student satisfactory at the end of the two-year period, it may recommend that the student will continue as JRF drawing the same fellowship as before, i.e., Rs. 12,000/- (Current rate)

- 3 It is expected that Fellows will have published work to continue their fellowship. This will form an important quantitative and qualitative criterion for judging the progress made by the student.
- 4 Extension of fellowship from the 3rd to the 4th year for an SRF will be on the basis of the progress report that the student will submit and on the basis of the recommendation of the supervisor.
- 5 The PBIR research fellows and the M-JRF fellows are also allowed to avail themselves of fellowship from any other agency such as UGC/CSIR etc. if they have succeeded in obtaining such a fellowship.
- 6 The total tenure as JRF plus SRF will not exceed 5 (Five) years. This will include the tenure of fellowships awarded by UGC/DST/CSIR or any other funding agency/institution. A student who has joined as an M-JRF must inform SNBNCBS if he/she has availed of any such fellowship prior to joining SNBNCBS. In rare and exceptional cases, with a recommendation of the Thesis Committee, the fellowship may be extended. The terms and conditions on this issue has been formulated by the 5th CAC Meeting on 7.09.2006 as mentioned below:
 - 1 Generally 5 year period should be sufficient for completion of the research;
 - 2 Extension, if any, would be for 6 months, but conditional based on merit and the student should have one 'accepted' paper in journals; For students who joined till 2005, this extension will be viewed leniently;
 - 3 Further extension of 6 months might be granted to students who joined till 2005; monthly stipend should be reduced to 75% ; The stipend would stop after 6 years;
 - 4 Extended Senior Research Fellowship might be granted (upon application) to students requiring some time till joining a suitable Post Doctoral Fellowship for 6 months, extendable by another 6 months. This will be done only after submission of Thesis. ESRFs might be engaged as Teaching Assistants in courses. SRFs who submit their Theses within the tenure of 5 years, will be granted the status of Extended Senior Research Fellow for one year (to be counted from the day they submit) [Ref. Office Order no. SNB/AP-3-501/A-76 dated 10 January 2008].

6. OTHER FINANCIAL SUPPORT FOR RESEARCH:

- 1 The students (JRFs & SRFs) are paid contingencies for their research expenditure. At present it is Rs 5000 per year for JRFs and Rs 7,500 per year for SRFs (or as to be declared from time to time). This amount is paid as reimbursement of the claim bills submitted. The terms of utilization may be adhered to as under:
 - 1 Tours undertaken within the country in the interest of research work.
 - 2 Registration Fee for attending Seminars/Conferences/Workshops.
 - 3 Other expenses exclusively for the purpose of research work.
- 2 The students are encouraged to attend and participate in advanced schools, workshops and conferences held in the country as well as abroad. The Centre provides financial support to the students for participating in such activities and events.
- 3 The Centre provides adequate funding and facilities for carrying out advanced research. Other substantial expenditure involving equipment and consumables are given to the Faculty with whom the student is registered.

7. **PUBLICATION/PATENT**

The results of a Fellow's research work may be published in standard refereed journals at the discretion of the Guide or Dean (AP). It should be ensured that the assistance provided by the agency providing fellowship is always acknowledged in all such publications. The right to commercial exploitation of the result and patent right arising out of the investigation will, however, rest with SNBNCBS (DST). Only in cases of NET (CSIR) fellows, the above right will rest with CSIR and SNB.

8. **OBLIGATION OF RESEARCH FELLOWS** (including students in PBIR programme)

- 1 He/She will be a full time researcher and submit himself/herself to the disciplinary regulations of the Centre/Institute/Laboratory where he/she is working. Regular attendance of the fellow may be ensured by the supervisor/teacher/department by keeping an attendance register.
- 2 In case a Fellow decides to appear for any competitive examination, he/she would invariably seek permission from the supervisor and inform the Director about it.
- 3 The Research Fellow is not to take any assignment other than related to his/her approved research programme, paid or unpaid. His/Her taking up any paid assignment at any time in the course of fellowship, without prior permission in writing from the Director, SNB, is liable to attract disciplinary action including termination of fellowship.

- 4 Once a Research Fellow accepts the Fellowship and joins, it is incumbent on him/her to continue the research for the normal tenure of the fellowship or for a period less than that during which the original objectives of the research problem may have been achieved.
- 5 No fellow shall discontinue his/her Fellowship without prior approval of the Director, SNBNCBS. In case he/she wishes to discontinue the fellowship prior to completion of the tenure on attainment of original objectives of research, he/she must submit the resignation to the Director, SNBNCBS through the Supervisor/Dean one month in advance, indicating specific reasons for not continuing the Fellowship. The Fellowship shall cease from the date stipulated in the SNBNCBS Clearance Certificate approving the resignation.
- 6 In case a student decides to discontinue the fellowship, take up a job and continue the research work informally under his/her supervisor, he/she should obtain prior permission in writing from the Director, SNBNCBS. Certain facilities like the computer and limited use of the library would be given to him/her for a certain period in that case.
- 7 The research fellows should submit by the 20th day of every month, the scholarship/fellowship claim bill form containing a brief report on the progress of work duly countersigned by the guide or Dean to the Students' Programme Division. The PBIR students should submit a report on their attendance at classes, i.e. no. of classes held and no. of classes attended. For both PBIR and PMSc students, attending 100% classes is mandatory. However, on account of exigencies, the attendance may be considered upto 90%, not less than that. Absence more than 10% without adequate reasons (like medical exigencies) would attract deduction from the stipend.

9. LEAVE

- 1 Leave with stipend not exceeding 45 days for each completed year of tenure may be allowed by the competent authority (Head of the Department upto 10 days, and Dean (AP) upto 30 days). The leave will be treated as part of the Fellow's tenure. The leave due can be carried over to the next year; however not more than 90 days can be accumulated at any time during the tenure. Of this not more than 30 days can be availed of at the end, prior to completion of the tenure of fellowship. During the first year of Fellowship or any incomplete year, leave may be granted on pro rata basis. Sanction of leave without stipend may be considered by the Director, SNBNCBS under special circumstances. In case a Fellow proceeds on leave before termination of fellowship, he/she must join back before the expiry of tenure, failing which the tenure will be deemed to have terminated with effect from the date he/she proceeded on leave. The fact of joining back from leave should be communicated to Dean (AP) immediately.
- 2 The Supervisor/HoD/Dean (AP) can grant leave to a Fellow in his/her charge with the concurrence of the Dean (AP) if the leave is due, as prescribed in the above paragraph. If leave is not due, such cases will be decided by the Director, SNB only. The Fellow

should not be allowed to proceed on leave to visit abroad for attending conferences/seminars etc. without prior approval. The entire duration of such foreign visit if funded by any national/international agency, whether partially or fully, would be treated as leave without stipend.

- 3 Women Fellows with less than two surviving children are entitled to full stipend during the period of absence upto 135 days on grounds of maternity. Such leave shall be forwarded by the Supervisor/HoD and sanctioned by the Dean (AP)/Director. The Fellowship amount for leave period will be paid after the fellow resumes duty and submits a medical certificate in support of actual confinement. It is expected that the Fellow will make up the deficiency during the remaining tenure.
- 4 Male Fellows of SNB with less than two surviving children are entitled to 15 days paternity leave during confinement of his wife on submission of relevant documentary proof.
- 5 Research fellows will be allowed Leave of absence-on-Duty for any academic work to be carried out outside the Centre with prior concurrence/approval of the competent authority, i.e. Supervisor, HoD, Dean (AP), Director, as the case may be.
- 6 For leave on medical ground, a certificate from the attending doctor may have to be submitted along with the leave application form.

10 TERMINATION OF STIPEND/FELLOWSHIP

10.1 The Fellowship shall normally stand terminated on completion of its tenure or from the date the Fellow resigns and his/her resignation has been accepted. The fellowship may also be terminated if the fellow is found to be not well enough in his studies/research or is found to be involved in indisciplinary activities. The decision of the Director based on the opinion /recommendation of enquiry committee/academic authority shall be final.

10.2 If a fellow leaves the Centre without permission, stipend due at any time shall not be paid to her/him, till all dues are cleared and certified by the Supervisor/Dean (AP). Responsibility in such cases shall be that of the Fellow.

- 3 Research Fellows must settle their claims within one year of leaving the Fellowship.
- 4 Taking part in unlawful activities or inciting other students to engage in unlawful activities may lead to termination of stipend/Fellowship.

10 MEDICAL BENEFITS

Research Fellows may be provided medical benefits as per SNBNCBS rules. This will be limited to the fellow only and not for his/her family members/dependents. For calculating the medical benefits the criterion will be the basic pay of central Govt. employees.

11 GENERAL

These terms and conditions supersede all previous instructions issued with regard to PBIR students/JRFs/SRFs & Project Assistants. However, any relaxation would require approval of the Director, SNBNCBS. In all matters decision taken by the competent authority, SNBNCBS shall be final.