

## Guidelines for PhD

### **Thesis supervisor:**

1. Thesis supervisor should be appointed after successful completion of the comprehensive exam.
2. Co-supervisors, if required, should also be appointed at this time.
3. The supervisor(s) should meet with the student regularly in order to ensure that there is steady progress in the goals. Interaction with the student should also be utilized to instruct the student about details of working in the lab and maintaining records.
4. The supervisor(s) should ensure that interactions with students are conducted in a cordial and congenial atmosphere and that the student has an adequate opportunity to contribute planning and execution of research projects.
5. The supervisor(s) is also the main mentor for the student, and hence they should spend time to understand the future goals and guide the student in planning their career immediately after PhD.
6. The supervisor should provide a clear picture to the student about the research goals expected for the award of a PhD and also provide regular feedback on work, progress of the research as well as presentation/writing/communication skills, etc. so that they can improve in due course. These may evolve over time as the student progresses but the minimal expectations must be communicated clearly.
7. If the progress of a student, as judged by the doctoral committee, is satisfactory then the JRF to SRF promotion should be recommended at the end of two years in the program. If the progress is not satisfactory then reviews should be conducted every six months to decide whether the student should be promoted before the end of their third year or shift to work with someone else, or leave the program.
8. In case of students with external funding, the doctoral committee should join with the committee as mandated by the funding agency for the JRF to SRF review, as also for the review at the end of four years.
9. The expected duration of a PhD is 5 years. The minimum residency period is 2.5 years, of which at least one year should be after assignment of supervisor. The maximum period for which students can stay in the program is 8 years.
10. Fellowship in a PhD program is for at most five years. The institute may provide 50% of SRF fellowship to students for up to six months after completion of five years on the recommendation of the doctoral committee.

### **Doctoral Committee:**

1. The doctoral committee should have at least two members other than the supervisor and co-supervisor(s). Additional members from outside the institute may be added if required.

2. The doctoral committee should be appointed within one month of the appointment of the thesis supervisor. The composition of the committee should be informed to the student as soon as the committee is formed.
3. The doctoral committee should meet with the student in person at least once a year for a review. This meeting should include a detailed presentation by the student about the work done during the period, and plans for the next year. Suitable feedback for improvement and further progress should be communicated to the student. Submission of annual reports and reviews is required for continued registration in the program.
4. The committee should be convinced that there is a clear plan for the thesis work given time constraints and other logistical constraints, and the student has developed sufficient understanding of the field before recommending JRF-SRF conversion. A brief description on the details of the progress made by the student, contributions in the research publications (if any), or manuscripts and outline of the future plan as well as suitable justification should be included in the recommendations. Also, in case of shortcomings, the student should be suitably counselled, and the plan of action for overcoming these along with critical feedback for improvement should be communicated to the student.
5. The doctoral committee should meet more frequently if the supervisor and the doctoral committee is not satisfied with the progress made by the student. In case a student has not submitted thesis by the end of six years (or five years from the comprehensive exam), the doctoral committee must meet once in six months to review the progress.
6. In case the doctoral committee is not satisfied with the progress of the student then a warning should be given and a roadmap for improvement should be provided. The committee should meet frequently to assess the situation. In absence of adequate improvement, the doctoral committee can recommend that the student leave the group/lab. In such a case, the student can look for another supervisor within a few months or leave the program.
7. Members of the doctoral committee should be available for a one on one session with the student if desired by the student.
8. The report of the doctoral committee should include a recommended plan and expected timeline for thesis submission in each meeting starting with the review meeting at the end of four years.
9. Wherever necessary, help from the head of the department may be sought.

**Student:**

1. The most important thing for the student to realize is that a PhD is unlike any other degree.

In a PhD, unlike other degrees where you take courses, pass exams and satisfy bulk of the requirements. In a PhD, the requirement is to learn how to solve problems that have not been addressed by others. Posing the problem, choosing and using appropriate tools while maintaining rigour are all parts of the training. It is also important to self critique and understand the limitations of our own research work. Any student is expected to achieve the first two and take steps towards the third. Indeed, it is expected that a good student will do at

least one problem from proposal, setting up, solving and writing the manuscript almost independently during PhD. After all, once you complete your PhD you are treated as a potentially independent researcher who can also be asked to review manuscripts submitted to journals by other authors.

2. The first step in the PhD is to frame the problem. For this the student should not only work on the specific problem assigned by the supervisor but do additional reading to understand the context of the problem in the field and implication of finding a solution. The student must have a clear idea of the research area with the larger context by the end of assessment for JRF to SRF upgradation.
3. It is expected that the student will work hard and full time on research and any teaching related responsibilities that may be assigned by the department. The quantum of teaching related responsibilities is to be assigned by the department. Typical assignment is 3 hours per week during a semester for 5-6 semesters, or 6-8 hours per week for 2-3 semesters.
4. The student should make it a point to record their progress and efforts. The student should also meet the supervisor regularly for discussions and to report progress.
5. Submission of annual reports and reviews is required for continued registration in the program.
6. The student should also apprise members of the doctoral committee of her/his progress.
7. Review of progress for students should be carried out each year. Students must submit a detailed written report for each review. Reviews may be scheduled more frequently if required.
8. Students should attend seminars regularly in order to learn about topics other than their own research work.
9. Students should bring any academic or administrative problems they face to the attention of their supervisor, doctoral committee, head of the department and dean academics, in that order.
10. Research can have stressful periods and students should see the counsellor if they are facing a problem and don't know who to discuss this with.

**General:**

1. It is essential that everyone concerned: Supervisor, members of the doctoral committee and the student maintain an ethical and a collegial atmosphere in their interactions. Special attention should be paid to remove any biases based on gender, caste, religion, etc. Any complaints should be directed to the relevant committee.
2. The institute should organize open sessions to make students aware of the grievance redressal mechanisms.