



ICTS

INTERNATIONAL
CENTRE *for*
THEORETICAL
SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ACADEMIC HANDBOOK *for* PHYSICS (2026-2027)

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Place: Bengaluru

All rules are subject to change and one may refer to

https://www.tifr.res.in/academics/academic_procedures.php for additional clarifications.

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1. Faculty mentor, course structure, and evaluation

A. Faculty Mentor

During the period of the PhD coursework, each student will be assigned an ICTS faculty mentor (who may not necessarily be the PhD supervisor). Students may approach their mentors to discuss problems of any kind (apart from solving the homework problems) that would help them adjust to the academic life at ICTS.

The mentor will be their main contact person till the student finds their prospective PhD supervisor. Once the PhD advisor preference forms are submitted by the student, the PhD advisor will be the mentor and the contact person. Post registration, the PhD advisor and the Thesis Committee (TC) will take over the role of the mentor. Students are required to get in touch with their mentors at least once a month and get the online academic progress card (APC) filled and submitted by the 10th of every month. If the mentor is away from work, the student can get the progress card filled by the Convener of the Graduate Cell.

You can speak to the Convener of the Graduate Cell in case you do not wish to speak to your faculty mentor, or if the mentor is unavailable.

B. Course Structure

Core/Elective/Reading courses are typically of 4 credits. Lab courses and Projects are of 8 credits.

PhD: Minimum 60 credits: Students enrolled in the PhD program (i.e. with an MSc in Physics) are required to complete a minimum of 60 credits.

Integrated PhD: Minimum 80 credits: Students enrolled in the Integrated PhD program with ME/MTech, MSc in subjects other than physics, BE in engineering physics, BSc/BS (4 years) in Physics are required to complete a minimum of 80 credits.

Integrated PhD: Minimum 100 credits: Students enrolled in Integrated PhD with BSc /BS (3 years) and BE/BTech (specialisation other than engineering physics) are required to complete a minimum of 100 credits.

The credit breakup is given below:

Course structure for the Physics PhD/Integrated PhD program

	Int. PhD.	Int. PhD.	PhD.
Minimum number of credits	100 credits	80 credits	60 credits
Compulsory requirements (number of credits shown in parenthesis)	5 core (20) +RM (4) +RPE (2); 1 lab (8); 3 projects (24); 7 elective/topical classroom courses (28): total 86 credits	5 core (20) +RM (4) +RPE (2); 1 lab (8); 2 projects (16); 2 elective/topical classroom courses (8): total 58 credits	5 core (20) +RM (4) +RPE (2); 2 projects (16); 2 elective/topical classroom courses (8): total 50 credits
Number of credits as per students' choice: any combination of classroom or reading courses or projects	14 credits	22 credits	10 credits
Suggested timeline for choosing advisor (after two projects)	End of Semester III	End of Semester III	End of Summer I
TIFR PhD registration deadline	End of 3rd year	End of 3rd year	End of 2nd year

Here is a suggested plan for completing the credit requirements for PhD registration. Core courses are shown in bold font. **Students have the option to deviate from this plan (in consultation with their faculty mentors) provided they can meet the credit requirements before the registration deadline.**

Semester I (Aug-Nov)	Recommended Coursework: 5 Core Courses [Total credits = 18]	Recommended Coursework: 5 Core Courses [Total credits = 18]	Recommended Coursework: 5 Core Courses [Total credits = 18]
	Classical mechanics (4)	Classical mechanics (4)	Classical mechanics (4)
	Statistical Mechanics I (4)	Statistical Mechanics I (4)	Statistical Mechanics I (4)
	Quantum Mechanics I (4)	Quantum Mechanics I (4)	Quantum Mechanics I (4)
	Mathematical Methods (4)	Mathematical Methods (4)	Mathematical Methods (4)
	Research methodology I (2)	Research methodology I (2)	Research methodology I (2)
Semester II (Jan-Apr)	Recommended Coursework: 1 Core Course + 3 CoOp/ Topical Courses [Total credits = 16]	Recommended Coursework: 1 Core Course + 3 CoOp/ Topical Courses [Total credits = 16]	Recommended Coursework: 1 Core Course + 2CoOp/ Topical Courses + Project [Total credits = 20]
	Electrodynamics (4)	Electrodynamics (4)	Electrodynamics (4)
			Research project (8)
	Numerical Methods(4)	Numerical Methods (4)	Numerical Methods(4)
	Statistical Mechanics II	Statistical Mechanics II	Statistical Mechanics II
	Quantum Field Theory	Quantum Field Theory	Quantum Field Theory
	General Relativity	General Relativity	General Relativity
	Tools of Astrophysics	Tools of Astrophysics	Tools of Astrophysics
	Many Body Physics I	Many Body Physics I	Many Body Physics I
	Topical Course 1	Topical Course 1	Topical Course 1
	[Total credits = 8]	[Total credits = 8]	[Total credits = 8]

Summer I (May-Jul)	Research project (8)	Research project (8)	Research project (8)
Semester III (Aug-Nov)	Recommended Coursework: RMII+RPE+Lab + 1 CoOp/Topical Course + 1 Project [Total credits = 24]	Recommended Coursework: RMII+RPE+Lab + 1 CoOp/Topical Course + 1 Project [Total credits = 24]	Recommended Coursework: RMII+RPE + 3 CoOp/ Topical Courses or 1 CoOp/Topical Course + Project [Total credits = 16]
	Research methodology II (2) Research & publication ethics (2)	Research methodology II (2) Research & publication ethics (2)	Research methodology II (2) Research & publication ethics (2)
	Research project (8)	Research project (8)	
	Lab Course (8)	Lab Course (8)	
	Elasticity and Fluid Dynamics	Elasticity and Fluid Dynamics	Elasticity and Fluid Dynamics
	Physics of Living Matter	Physics of Living Matter	Physics of Living Matter
	Many-Body Physics II	Many-Body Physics II	Many-Body Physics II
	Topical Course 2	Topical Course 2	Topical Course 2
	Topical Course 3	Topical Course 3	Topical Course 3
Semester IV (Jan-Apr)	Recommended Coursework: 3 CoOp/Topical Courses + 1 Project [Total credits = 20]	Recommended Coursework: 2 CoOp/Topical Courses or 1 Project [Total credits = 16]	
	Research project (8)	Research project or 2 electives (8)	
	Statistical Mechanics II	Statistical Mechanics II	
	Quantum Mechanics II	Quantum Mechanics II	
	General Relativity	General Relativity	
	Tools for Astrophysics	Tools for Astrophysics	
	Topical Course 4	Topical Course 4	
Summer II (May-Jul)	Research project (8)		PhD Regn deadline
Semester V (Aug-Nov)	2 electives/ topical (8)		
	Research project or 2 electives (8)		
Semester VI (Jan-Apr)			
Summer III (May-Jul)	PhD Regn deadline	PhD Regn deadline	

i. Semesters, coursework and projects

The academic session is divided into two semesters: Autumn Semester (August - December) and Spring Semester (January - April). In addition, students do projects and take short elective courses during the summer months (May - July).

Students are offered a coursework program that involves a mixture of compulsory core courses, choice-based elective courses, a lab course and research projects. In each semester, students are evaluated by a continuous evaluation process consisting of assignments, mid-semester examination, end-semester examination, and any other criterion set up by the instructor of the course

Core courses are compulsory. If a student feels that they already know the course well enough, they can appear for a **drop test** at the beginning of the course. A satisfactory performance ($> B$; i.e., $> 65\%$) allows the student to earn credits for the course (without attending it). Students are required to contact the course instructor for the drop test schedule and syllabus.

Elective courses are based on students' preferences. Students can choose electives from the courses offered at ICTS/IISc/NCBS/RRI/CAM and other campuses of TIFR. These can be either classroom courses or reading courses. For more details on the requirements, please see the table above. Different groups require that students joining them do certain elective courses. Please see the table below for this information:

Research Group	Core Optional
Condensed Matter Physics	Statistical Mechanics II / Quantum Mechanics II / Many-Body Physics I / Many-Body Physics II
Statistical Physics	Many-Body Physics I / Statistical Mechanics II / Elasticity and Fluid Dynamics / Numerical Methods
Fluid Dynamics	Elasticity and Fluid Dynamics / Numerical Methods
Biological Physics	Statistical Mechanics II / Elasticity and Fluid Dynamics / Physics of Life / Numerical Methods
Astrophysics and Relativity	Tools for Astrophysics / General Relativity / Numerical Methods
Strings	Quantum Mechanics II / Quantum Field Theory / General Relativity / Statistical Mechanics II

Reading courses can be taken by students with any faculty member at ICTS. These courses are graded through either regular assignments, or through two exams (mid-term and final), or a combination of these.

Projects can be done with any faculty member at ICTS. Students are encouraged to do projects with multiple groups before choosing the thesis advisor. The student is graded based on a project report to be examined by the project guide, and a seminar presentation to be examined by a two-member committee. The final grade will be based on these two evaluations (equal weightage).

The committee constituted to evaluate the seminars will not only grade the performance of the candidate but also determine whether a sufficient amount of work has been done in the Project under review. The committee may, for example, decide that the work done is insufficient to earn full credit (8), in which case the student will be given an Incomplete (I) grade. The scope of the project will have to be extended according to the recommendations by the committee with the approval of the graduate cell. The seminar will be held again at the end of the following semester.

ii. Course registration

Registration of courses/projects in each semester needs to be done by the deadline specified in the Academic Calendar (**14th August** for Autumn semester, **10th January** for Spring semester and **10th May** for Summer semester). The academic office and the faculty mentor should be informed about the course registration within the specified timelines.

iii .Dropping the course

The core courses can be dropped with credit via a drop test at the beginning of the semester. A satisfactory performance (> B; i.e. > 65% marks) then allows the student to automatically earn credits for the course.

With due reason and permission from the Convener, Graduate Cell, you can take the core courses in a different semester, provided the course credits are completed within the PhD registration deadline. The academic office and your faculty mentor should be informed about this within the course registration deadline.

The elective courses that you have registered for, can be dropped before the deadline specified in the Academic Calendar (**15 October** for the Autumn semester and **28 February** for the Spring semester). The academic office and the respective faculty mentor should be informed about this within the specified timeline. The dropped elective course will not be listed in the final transcript if it is informed to the academic office and the faculty mentor within the specified timeline. The student may register again for the same course at a later semester.

iv. Courses offered at ICTS

All Physics core courses are offered at ICTS. The list of courses offered at ICTS this academic year will be updated here: <https://courses.icts.res.in/>

v. Courses offered at other institutions

You may also register for the courses offered at IISc, NCBS, CAM-TIFR, RRI.

C. Evaluation

i. Announcement of grades:

The grades will be announced soon after we receive the grades from the course instructors in ICTS and other institutions. The nominal expected dates for the announcement of grades are given in the Academic Calendar.

Marks	Grades	Grade points	Interpretation
95 – 100	O	10	Outstanding
85 – 94	A+	9	Excellent
75 – 84	A	8	Very Good
65 – 74	B+	7	Good
55 – 64	B	6	Above Average
51 – 54	C	5	Average
50	P	4	Pass
< 50	F	0	Fail

ii. Fail or Incomplete (I) Grade

In case a student attends a course but is unable to participate in the final examination for reasons beyond his/her control, they will be given an "I" (incomplete) grade. Such a course will not be included in the CGPA and will not be treated as a failed course. However, the clearance process will be the same as for a failed course. A student may acquire a maximum of 3 'Incomplete' grades during the entire coursework. Beyond this, all incomplete courses will be treated as 'failed' courses. The course instructor, in consultation with the Convener, Graduate Cell, can arrange for one or more special test(s)/ assignment(s) after the end of the semester to evaluate the performance and convert the incomplete grade into a regular grade. This procedure is to be adopted only in exceptional situations.

If a student fails a compulsory (core) course, they have to repeat it when it is offered next; if they pass the course, the new marks will replace the old (failed) marks on the student's transcript.

A student who fails an Elective course can replace it with a different Elective, in consultation with the Convener, Graduate Cell, ICTS.

The final transcript will show grades only for those courses which were credited and passed by the student. However, the student needs to clear all the Core (Compulsory) courses along with the prescribed Elective and Topical courses to complete the course requirement.

The marks secured by a student in all the courses taken are used to calculate a Cumulative Grade point average (CGPA) as follows:

$$CGPA = \frac{\sum_n C_n G_n}{\sum_n C_n},$$

where G_n is the grades secured in a course with Credits C_n and both sums run over all the courses taken till the date concerned.

iii. Academic Probation and terminations

The CGPA is the major criterion in determining the performance of a student in the course work. If the CGPA of a student falls below 5.5, they will be placed on Academic Probation and will remain so until the CGPA becomes 5.5 or more, or the course work ends whichever is earlier. Likewise, if a student fails (marks < 50) in one course, they will be placed on Academic Probation and will remain so until they clear the course. A student on Academic Probation may be permitted to take one course less during the ongoing semester in consultation with the Graduate Cell Convenor.

For students in the Integrated PhD program, the MSc degree awarded will have a Class attached to it according to the following CGPA ranges:

- CGPA 7.50 and above: First Class with Distinction
- CGPA 6.00 to 7.49: First Class
- CGPA 5.00 to 5.99: Second Class
- CGPA 4.00 to 4.99: Pass
- CGPA below 4.00: Fail

As per the SBP rules, the academic programme of a student will be **terminated** if

- he/she **fails in more than two** courses, irrespective of CGPA
- he/she **fails in two courses** and has **CGPA of other courses less than 6.5.**
- he/she **fails in one course** while **on Academic Probation.**

- he/she **fails to Register for Ph.D.** by the end of the 2.5 years (for Ph.D. students) or 3.5 years (for Integrated Ph.D. students).

This dateline will be extended by any time lost due to leave granted by the Subject Board for medical or other reasons. It may also be extended if the student has to clear courses with I grades.

- termination is recommended by the institute with sufficient reason(s) and approved by the SBP.
- termination on disciplinary grounds is recommended by a duly constituted authority.

Coursework requirements should be met before PhD Registration.

D. PhD advisor preference

The student's choice of a research advisor is one of the most important choices you will make in your academic career. In order to ensure a smooth "match-making" of the student and the advisor, the institute has included research projects as part of the coursework and set up a procedure to help you select an advisor.

The TIFR University rules require PhD (Integrated PhD) students to make the final choice of supervisor by the end of two (three) years. However, the institute encourages students to choose an advisor somewhat sooner so that students are not stuck without an advisor and a looming deadline from the University. The institute has set up a procedure to try and smoothly match students and advisors. Please try and understand this procedure clearly!

At the end of each research project, both the student and the faculty express their preferences. The student should clearly choose one of three options:

- (a) whether they want to work with this faculty member, or
- (b) whether they do not want to work with the faculty member, or
- (c) whether they would like to continue exploring further.

On the other hand, the faculty member must clearly choose one of two options:

- (a) whether they want to work with the student, or
- (b) whether they do not want to work with the student.

The faculty member does not have the option of being uncertain whereas the student does!

In the usual scenario, it is expected that at least one of the instructors of the first two research projects (by the end of Summer I for PhD students and by the end of Semester III for Integrated PhD students) will have chosen option (a). If this is not the case, the graduate cell will try and assist the student in finding a supervisor.

Note that it is possible for the student to choose option (b) or (c) on the first two research projects and continue exploring other options if they are not completely satisfied.

On the other hand, if the student has chosen option (a) on either of these projects, then the student is not encouraged to change their choice (except in special circumstances) since the advisor may have made plans assuming that the student is about to join his/her group. So please think carefully before making your choice.

i. Guidelines regarding ICTS students having primary advisor in another institute

For their PhD work, ICTS students can choose to work with a faculty mentor in another institute provided they can get an ICTS faculty to be their formal thesis advisor. The formal thesis advisor would be responsible for all administrative matters including holding annual TC meetings.

ii. Eligibility of a research supervisor, co-supervisor and thesis committee

Eligibility of a Research Supervisor

A Faculty member who has less than three years left till superannuation at the time of Registration of a student is eligible to be a Research Supervisor provided there is a co-supervisor who is not more than 55 years of age. A Faculty member who has less than six months left till superannuation at the time of Registration of a Ph.D. student is not eligible to be the Research Supervisor.

Eligibility of co-supervisors

- Any faculty member from TIFR or non-TIFR academic institutions
- The Col rules vis a vis the supervisor and co-supervisors may be relaxed as long as there are 2 additional independent members in the TC.
- The co-supervisor should not be present when the student meets with their TC without their Supervisor.

Eligibility of thesis committee members

- In addition to two independent TIFR faculty members, the TC may include PhD-qualified scientists e.g. TIFR SO(F) and above; Ramanujan/Ramalingaswami/ DST Inspire fellows or equivalent from TIFR or non-TIFR academic institutions; or scientists from the R&D sector.
- Exceptional cases of TIFR SOs at lower levels may be specifically permitted by the SB Convener

E. Exit options

i. Exit with MSc (for Integrated PhD students)

In compliance with the NEP, students may avail of the MSc exit option at any time during their I-PhD tenure, provided they have completed their Subject Board requirements for the award of the MSc degree. However, such a student is eligible for the I-PhD fellowship only at the 1st-year level, since the enhanced (PhD level) fellowship is given with the implicit commitment of continuing in the I-PhD programme. Therefore, once the MSc exit option is declared, any extra fellowship paid from the beginning of the 3rd year will be recovered by TIFR.

Details of the fellowship amount and rules for recovery of fellowship are provided in the link below: https://www.tifr.res.in/academics/academic_procedures.php?t=cat6

ii. Exit with MSc (only MSc degree holders)

PhD students may apply for an MSc degree after completing their coursework plus a research project of minimum 1 year's duration. This is offered in lieu of the MPhil (exit) degree which is no longer permitted by the UGC.

This option is available to all PhD students in all Subject Boards (except SBSE since we are not accredited to award Master's in Sci Ed). Students who have not found a PhD guide may identify a guide specifically for a 1-year MSc project.

PhD students who exit with an MSc may continue to be paid at the pre-registration level if they have not registered and are pursuing a 1-year research project, or at the post-registration level if they have registered.

The request for an MSc degree must be initiated by the student.

https://www.tifr.res.in/academics/academic_procedures.php?t=cat6

2. Comprehensive exam, PhD registrations, annual extensions

A. Comprehensive exam and PhD registration

PhD students have to register for PhD before the end of two years after joining ICTS. **Integrated PhD** students have to register for PhD before the end of three years after joining ICTS.

For any extension of this deadline, the students should send a request to the GC specifying reasons for asking for an extension. The request has to be supported by the prospective thesis advisor. The GC can recommend an extension up to a maximum period of six months. Fellowships will stop if an extension is not granted.

Before registering, students are also required to give an oral comprehensive examination. The exam will consist of questions from the research project as well as coursework. The assessment panel will consist of the student's advisor, an external faculty and another ICTS faculty member. The panel will be chaired by the ICTS faculty member (non-advisor).

Every registered student must have a Thesis Committee (TC). The TC will monitor the progress of the doctoral work, help in mentoring the student, and advise the student as well as the supervisor, if necessary.

For more details, see:

https://www.tifr.res.in/academics/academic_procedures.php?t=cat5

Students should make sure that the coursework requirements, oral comprehensive exam, formation of TC and thesis proposal are completed before the PhD registration deadline. Please note that it is your responsibility to find an advisor and be registered by the due date.

A change of the subject board may be considered in exceptional cases and should be discussed with the academic office, PhD supervisor and the Convener, Graduate Cell.

Please note that any student at ICTS is free to choose any of the ICTS faculty members as a PhD supervisor. For example, a mathematics student can choose someone in the statistical physics group as an advisor, or a physics student can choose someone in the maths group, but they should both agree to follow the guidelines of the subject board in which the student is registered.

When the student is ready to register for PhD, the following procedure needs to be followed.

- i. Your coursework and comprehensive examination requirements should be complete before PhD registration.
- ii. Comprehensive exam report upload on Datanet 2.0 should be complete.
- iii. After your comprehensive exam report is uploaded on Datanet 2.0, you will have to upload the following documents on the datanet 2.0
<https://datanet2.tifr.res.in/icts>:
 1. Self-signed research proposal (1-2 pages)
 2. Transcript
 3. Thesis committee formation form (form available on Datanet2.0)
- iv. You will be intimated about your PhD registration after the approval from the competent authorities. via email and the fellowship will be hiked following the rule here (section A)
https://www.tifr.res.in/academics/academic_procedures.php?t=cat2
- v. Please note that your PhD registration will expire on 31st July after you complete 1 year past your regular term (regular term = 5 years for PhD and 6 years for I-PhD students). If you do not submit your thesis within this duration, then you will have to re-register for your PhD. For more details, please refer to this link https://www.tifr.res.in/academics/academic_procedures.php?t=cat4

B. Annual assessment and extensions

i. Assessment before PhD registration

Annual assessment formalities for students before PhD registration will be initiated in the month of June. Annual assessment is based on the monthly academic progress card report and the academic performance of the student. The student will be provided an extension note by July.

ii. Assessment after PhD registration

Annual assessment formalities for students after PhD registration should be initiated by the TC in the month of May. The deadline for completion of the formalities will be announced by the Academic Office. TC is expected to monitor the progress of the student till his/her PhD throughout the year.

Students are required to meet their thesis committee at least once a year. In addition to the regular meeting, the thesis committee should meet the student in the absence of the Advisor as a matter of course in case there is anything the student wishes to say in confidence. There is no restriction on the maximum number of times the TC can meet the student.

TC members are encouraged to interact with the student multiple times in a year, and individual TC members can also talk with the student one-on-one. Students are encouraged to talk to their TC members or the Convener, Graduate Cell or the subject board representative for any academic problems.

Any serious problems envisaged in the progress of the student should be brought to the attention of the Convener, Graduate Cell and the Subject Board.

PhD registered students will have an annual assessment in the month of May/June. Students will have to give a presentation about their project for about 30-40 mins followed by a question and answer session in front of their TC. For every student, a report from the TC is necessary for the annual extension. This report (template available on Datanet 2.0→ forms/ Information) along with your work report extracted from the Academic Portal should be uploaded on Datanet 2.0 by your supervisor by the end of June [for parts (a, c, d), separate PDFs need to be uploaded on Datanet 2.0 and for part b, text needs to be added by the supervisor]. After completing this formality, the student will be given an extension note by July. If the TC report and work report is not available, the student may be denied an extension of the Fellowship for the next academic session.

For more details on the TC, see

https://www.tifr.res.in/academics/academic_procedures.php?t=cat5

Annual extension of both registered and unregistered students can be processed only after an anti-ragging affidavit is uploaded on datanet 2.0.

C. Change of research supervisor / co-supervisor / thesis committee

If the change of supervisor takes place after registration, the new thesis proposal has to go through the standard approval/ assessment procedure that the original proposal went through. The fellowship increase upon Registration will be unchanged if the student is already registered.

For more details, please refer to this page

https://www.tifr.res.in/academics/academic_procedures.php?t=cat5

3. Synopsis submission and its requirements

A. Change in the title before/during synopsis submission

The title you enter at the time of Registration is a tentative thesis title. You may enter a different title at the time of synopsis submission, no additional permissions are required. However, the title in the PDF of your synopsis/thesis must match what you type in the Datamet 2.0 field, or your submission will be rejected.

For more details refer to Section A here

https://www.tifr.res.in/academics/academic_procedures.php?t=cat7

B. Research Publications

The PhD thesis should be an advanced exposition of a particular topic. It must demonstrate that the candidate has done a significant amount of original work in the chosen subject. One of the necessary criteria for this is that at least some part of the thesis, where the candidate has made a significant contribution, should be published/accepted for publication in a peer-reviewed journal.

For large collaborations that follow a rigorous internal review process, a Collaboration Note based on the work of the candidate (that has passed through such a review) can be considered as publication. However, such a note should be publicly available. Where such a note is not yet publicly available, the student's work in question should be certified by a competent authority (spokesperson/ coordinator or equivalent) from the collaboration before the Synopsis is submitted.

When the student submits the Synopsis, they should include a declaration specifying his/her exact contribution to the publication(s). This should be endorsed by the thesis advisor.

C. Synopsis: Submission, Seminar and Acceptance

i. Synopsis

When the student has completed his/her research work to the satisfaction of the Research Guide, they may submit to the Subject Board of Physics, a Synopsis of the research work carried out.

The Synopsis should be a broad description of the research, clearly stating the motivation for the work, the original work done, and in the case of large collaborative works, the specific contribution of the student. It should be intelligible not just to workers in the specific field of work, but also to workers in closely allied fields.

The Synopsis must be a PDF document of at least 10 pages and not more than 15 pages, legibly typed on A4-size pages in 12 pt font size, with 1.5 spacing and 1-inch

margins. In addition to text, it may contain figures, tables, sections of computer code, and a limited bibliography.

A separate sheet should be attached to the synopsis, with a list of the student's publications. These should be separated under two headings: publications relevant to the thesis and other publications.

If the thesis title has changed from that in the Registration Form, the student should indicate this and have the Guide approve it.

ii. Before Synopsis Seminar

1. Once the work required for the PhD thesis is completed (including the satisfaction of the above Publication criteria), the candidate should prepare a Synopsis of the would-be thesis and submit it to the PhD guide with a tentative week for the seminar at least 10 days prior to the synopsis seminar date.
2. The PhD guide will have to share the synopsis with the Convener, Graduate Cell/ Dean (if the Convener, Graduate Cell is the guide) and academic office along with the names of the committee members (5-6).
3. The Convener, Graduate Cell/ Dean will formulate the committee (with 5 members) and will share the list with the academic office.
4. In the meantime, the student needs to share the title and abstract with the academic office for the announcement. The announcement will be done once the seminar date is fixed.
5. The academic office will share the required evaluation form with the committee members, collect the evaluation, and share the input with the PhD guide.

iii. Synopsis Committee

6. The Committee will have five members, who must all be members of the TIFR Faculty or other institutes in Bangalore (e.g. RRI, IISc, NCBS, IIA, JNCASR, etc.)
7. At least two of the members must be non-ICTS faculty.
8. If the Ph.D. work is experimental, at least one of the members must be a theorist; if the Ph.D. work is theoretical, at least one of the members must be an experimentalist.
9. The Research Guide or a Co-Guide, or any person who has been a collaborator of the student on a substantial portion of the research work, may not be a member of the Evaluation Committee.

iv. After the synopsis seminar

10. The student should get in touch with their guide to make the necessary changes suggested by the evaluation committee.
11. Meantime, the Academic Office will coordinate with the seminar evaluation committee for the synopsis seminar report and will upload the approved report on Datanet 2.0. The student will receive an email alert once the report is uploaded.

12. Submit the final synopsis after the changes (if any suggested by the committee members) on datanet2.0.
13. The guide will have to share the suggested list of examiners for the Thesis (at least 3 possible external referees who work in India, plus at least 3 possible referees who work outside India).

The synopsis must be uploaded on Datanet 2.0. Instructions are available at https://www.tifr.res.in/academics/academic_procedures.php

4. PhD thesis submission and its requirements

A. Thesis submission

The thesis can be submitted any time starting from the day following the approval of the Synopsis on Datanet2.0, to a maximum of six months from the date of synopsis seminar.

Detailed instructions on thesis submission via Datanet2.0 is available at

https://www.tifr.res.in/academics/academic_procedures.php?t=cat7

B. Fellowship after thesis submission

The prescribed duration of PhD (Integrated PhD) at TIFR is 5 (6) years. Students who submit their thesis before the completion of their tenure will continue to get their existing fellowship and accommodation till the end of the above duration or Viva-voce, whichever comes earlier.

***If the student submits the thesis during their extension period, the date of thesis submission is the last date of their fellowship and accommodation.**

C. RA position after thesis submission

After submission of the thesis, students can be recruited as Research Associates for a maximum period of 6 months or till viva voce, whichever is earlier. Students and Research Supervisors will receive an email once a thesis has completed the approval procedure, a copy of which may be used to initiate the RA appointment. A recommendation for this has to be made by the advisor and the offer will be made in consultation with the Postdoc Committee and the Centre director. The salary of research associates will be 80% of the salary paid to the first-year post-doctoral fellows. They are eligible for HRA (as per institute norms), but are not eligible for contingency grant.

D. Revised Thesis Submission

Instructions for submission of revised thesis on Datanet2.0 is available at

https://www.tifr.res.in/academics/academic_procedures.php?t=cat7

5. PhD Thesis Defence (viva-voce examination)

A. Approval

If the reports of the external examiners, as well as the report of the Research Guide, are all positive, and only minor changes or revisions are required, the Convenor, on behalf of the subject board, gives the permission for the Viva-voce Examination (or thesis defence). Till this permission is received, the Research Guide should not undertake any communication with the external examiner(s).

Once the permission is received, the following committee is set up to conduct the Viva-voce examination.

- the Research Guide;
- the external examiner who works in India;
- representative of the Subject Board of Physics.

The Viva-voce examination will be set up at a date and time convenient to all concerned, with the help of the academic office. One or more of the principals may participate by videoconferencing if required. The SBP representative on the panel of examiners will chair the session during the Viva-voce examination and the deliberations which follow.

The student needs to share the title and abstract at least one week before the Thesis Defence for its announcement and necessary arrangements.

B. Viva-voce examination pattern

The viva-voce examination consists of three parts.

- An open seminar by the candidate, lasting not less than 45 minutes, which highlights the research work presented in the thesis. This may be attended by any interested person(s), in addition to the examiners.
- An open question-and-answer session, during which anyone in the audience of the open seminar (including the examiners) may ask questions or make comments on the material presented in the seminar.
- An in-camera examination, where only the candidate and the examiners will be present. In this part, the candidate may be asked searching questions to determine his/her level of involvement in the research work presented in the thesis (see below).

Before deciding to award the Ph.D. degree, the examiners should satisfy themselves of the following points.

- The results presented in the seminar are, on the whole, identical with those presented in the thesis.
- The candidate can present the research work competently and comprehensively, without help from any person(s).

- iii. The candidate can answer searching questions indicating that the work was actually carried out by him/her.
- iv. Any queries, doubts or clarifications raised by the external examiners have been answered adequately in the revised version of the thesis.
- v. The candidate can think clearly and rationally about the topic of his/her research.

In case the examiners are not satisfied with the Viva-voce examination, a re-examination may be set up at a date and time convenient to the candidate and the examiners. In extreme cases, a negative report of the Viva-voce examiners may lead to denial of the Ph.D. degree

For reference: <http://www.tifr.res.in/~sbp/new2015/viva.htm>

C. Final thesis submission after Viva-Voce examination

After the viva (<http://www.tifr.res.in/~sbp/new2015/viva.htm>), the student should incorporate any changes/corrections/additions suggested by the examiners, and prepare a final version of the Thesis. The title page should have the revised month and year according to the format provided on datanet2.0. The Research Guide should check that these changes have been satisfactorily incorporated before signing the thesis submission form.

Final thesis should be submitted via Datanet2.0. Instructions are available at https://www.tifr.res.in/academics/academic_procedures.php?t=cat7

For reference:

<http://www.tifr.res.in/~sbp/new2015/thesis.htm>

6. Extensions beyond 5 years (PhD) and 6 years (Integrated PhD)

A. Extension

PhD (Integrated PhD) students who require an extension beyond 5 (6) years should discuss this with their thesis advisor at least 6 months before the tenure end date. The thesis advisor will have to send a request to the Graduate Cell with his/her justification for the extension. Such requests will be discussed by the Graduate Cell and the extension will be granted as per the norms.

***If the student submits the thesis during their extension period, the date of thesis submission is the last date of their fellowship and accommodation.**

B. Emoluments

The fellowship in such cases will be reduced to one half of the original fellowship (Rs.21000/- per month, currently) with no contingency grant.

C. Thesis Fees

The student will have to bear the thesis fees of Rs.4,000/- if they fail to submit the thesis beyond the extension approved by the Graduate Cell.

For PhD re-registration, the instructions are available here:

https://www.tifr.res.in/academics/academic_procedures.php?t=cat4

7. Contingency grant, carry forward, grader's grant

A. Contingency grant

PhD students are eligible for a Contingency Grant for their first five years, and Integrated PhD students during their 2nd to 6th years. During their first year, the Integrated PhD students are entitled to a Book Grant of Rs. 30,000/-.

For claiming contingency grant, the instructions are available here:

https://docs.google.com/document/d/18BCpYwkjXcUf5Rqp6kldFGOp6W3PP0DPZsGt_Y40qu4/edit?tab=t.0#heading=h.9oqi7nddvxpu

B. Contingency carry forward

Students can carry forward their contingency grant for a known large expenditure such as travel costs for attending a conference, etc. The request should be made by the students mentioning the purpose to carry forward on Datanet and it should be recommended by the respective faculty mentor/ thesis advisor for the approval of the Convener, Graduate Cell.

For any queries related to the usage of contingency grants, the accounts team (accounts@icts.res.in) can be contacted.

For more details, please visit

https://www.tifr.res.in/academics/academic_procedures.php?t=cat2

C. Grader's grant

Any classroom course that is certified as a core/elective/topical course by the Convener, Subject Board, can have a grader who will receive a book grant of Rs.5000/- at the end of the semester. If the course has more than 10 registered students, the faculty can request two graders for that course. Each grader will get Rs.5,000/- as a grader's grant at the end of the semester.

8. Important contacts

A. Academic matters and office space

For all academic matters, including courses, results, comprehensive exams, PhD registration, annual assessment and extensions, synopsis and thesis submission, office space allocation etc., please contact the academic office: academics@icts.res.in; extension: 6042/ 6041

B. Accommodation

For any query related to on-campus accommodation please contact Anitha (guesthouse@icts.res.in) and for off-campus hostels, please contact Paramesha (paramesha.bs@icts.res.in). For personal bookings, go through the [housing guidelines](#) on the intranet.

C. Laptop/ Desktop/ IT/ Wi-fi

For any query related to laptop/ desktop/ IT/ wi-fi, please contact ithelp@icts.res.in; extension: 6300

D. Establishment

For any query related to your joining, leave, ID card, housing allotment, official letters, medical insurance etc. please contact establishment@icts.res.in; extension: 6016

E. Accounts

For any query related to the reimbursements, contingency grants, fellowship etc. please contact accounts@icts.res.in

F. Useful links

- [Welcome booklet](#)
- [Graduate courses](#)
- [Guidelines for academic ethics](#)
- [ICTS seminars and colloquia](#)
- [Holiday list](#)
- [Academic and Non-Academic Committees at ICTS](#)
- [Forms, Email lists](#)
- [Forms and information on Datanet 2.0](#)
- [Library](#)
- [Transport](#)
- [First Aid centre](#)
- [Counselling services](#)

G. Frequently Asked Questions (FAQs) for ICTS Students & Postdoctoral Fellows

FAQ for students and postdocs are updated on the ICTS intranet

Link: <https://intranet.icts.res.in/faqs-icts-students-postdoctoral-fellows>

H. Useful Information during joining

Useful information for students and postdocs during joining are updated on the ICTS intranet [Link:

<https://intranet.icts.res.in/useful-information-graduate-students-ltvsp-students-and-postdoctoral-fellows>]

