



# INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

## Department of Physics

### Some information and advice for new entrants to the Ph. D. Programme 2017

Dear Students,

Let me begin by welcoming you to IIT Kanpur. As Convenor of the Postgraduate Committee of the Physics Department, which monitors your academic performance and requirements, it is my pleasant duty to wish you a pleasant and fruitful stay here at IITK.

In order to make your stay here as smooth as possible, it is necessary that you should acquaint yourself with some of the academic rules, procedures and conventions of this Institute. In this handout, I have tried to address some of the salient points. Other things will become clear to you during your stay here.

#### Whom to contact

Let me assure you that IITK is a student-friendly institution, and we try, as far as possible, to take care of your bona fide problems, aspirations and complaints.

If you have any academic problems, queries or doubts, you should contact me, Prof. Sudeep Bhattacharjee, the Convenor of the Departmental Postgraduate Committee (DPGC), in my office located in Central Nuclear Labs, Tel. No. 7602. E-mail: sudeepb@iitk.ac.in). Once you get your e-mail account, please let the physics office know your email id.

If you have (serious) non-academic problems, you can contact our counseling section (web: <http://www.iitk.ac.in/counsel/>, House No. 503, Type V, IIT Kanpur, Tel. No. 7784, Email: [counsel@iitk.ac.in](mailto:counsel@iitk.ac.in)) and get the benefit. You are also free to contact, for any serious reasons, the Head of the Department, Prof. Debashish Chowdhury (Faculty Building FB-383, Tel. No. 7563. mornings only, E-mail: [head\\_phy@iitk.ac.in](mailto:head_phy@iitk.ac.in)).

Generally it is a good idea to send an E-mail to the relevant Faculty member and fix an appointment to meet him/her. Most of us check our E-mails regularly.

#### Course structure

In the first year, you will be doing your course work along with research. After the first year you would mostly be working on your thesis topic. You may also take more electives which are useful for your research.

#### Electives

In the Ph. D. Programme you are required to do 4 elective courses, two each in the 1st and 2nd semesters. Only in well-merited cases you will be allowed to choose more than two courses in a semester. You can choose any two elective courses from the list being offered by the Physics Department in that Semester, subject to consent of the Instructor and the DPGC Convenor. The normal semester load is defined as equivalent of 36 credits. Each course will be of 9 credits and therefore two courses would imply taking 18 credits and remaining 18 credits will be your thesis credits. Therefore, all in all you will be doing 36

credits per semester (2 course credits and two thesis credits), until your course work has ended. Thereafter you will be doing all thesis credits (36 credits per semester).

### Some important matters related to your Ph.D programme

Students registered in the Ph.D. programme must pass a comprehensive examination designed to test the overall comprehension of the student in the various subjects. A student can appear in the comprehensive examination only after she/he has completed the course requirements and satisfied the minimum specified CPI requirement.

A student enrolled in the Ph.D. programme is formally admitted to the candidacy for the Ph.D. degree after she/he has completed the course requirements for the degree with at least the minimum required CPI, and has passed the comprehensive examination. Only such students who are admitted to the candidacy will be allowed to submit Ph.D. theses.

Every Ph.D. student admitted to the candidacy for the Ph.D. degree is required to give a general seminar in the Department covering the State of Art (SOTA) of the area of research. This seminar must be given within six months of passing the comprehensive examination.

A doctoral mentoring and monitoring committee (DMMC) is usually constituted to monitor the progress of your research work. This committee monitors the progress of your doctoral work every semester after the completion of the SOTA seminar. In the semester, you deliver the SOTA usually report by the DMMC committee is not required.

Before proceeding to finalize the thesis, each Ph.D. student must deliver a seminar open to faculty and students in which the research work will be presented to obtain comments and criticism which may be incorporated in her/his thesis.

### Academic Session

The Academic year consists of two semesters of about 4 months each. Semester I commences in the last week of July and ends by December 5. Semester II commences just after Christmas and ends by May 5. The remaining period is divided into almost 3 months of summer break and about 3 weeks of winter break, apart from two mid-semester breaks of about 10 days each. During the year, you will have almost 3 months of vacation in the summer and about 3 weeks in the winter, apart from two mid-semester breaks of about 10 days each (usually timed to match with Holi and Dussehra respectively). You are expected to stay here in the summer and winter break to do your research work. The vacation and casual leave rules are given in the PG manual. An online version of the manual is available on the Institute web-page.

### Attendance

At IITK, attendance in all lectures, tutorials and laboratory classes is compulsory. You will also find that with our continuous evaluation system (see below), it is more useful to attend the lectures than to sit in the Library or your hostel room and study by yourself.

There is an attendance register in the department and signing in the attendance register is mandatory for all Ph.D students.

If you have a genuine medical problem and are unable to attend classes, you will have to get this certified by the Health Centre, IITK. Certificates from your family physician or any other medical practitioner are inadmissible, unless endorsed by a doctor from the Health Centre, IITK. However, if you are genuinely unwell, please do not force yourself to come to the class and make yourself worse (apart from spreading infection). Go to the Health Centre and take medical advice instead.

Students having a serious health problem, such as, for example, hepatitis or chicken pox, may be advised to formally apply for semester drop in order to recover and recuperate. This will not be counted as any discredit in the academic performance evaluation of the concerned student.

For any leave related matter please do not forget to fill out the relevant form, get it counter signed by your Ph.D supervisor and submit it to physics office. For details on the different types of leaves available please consult the pg manual (<https://www.iitk.ac.in/doaa/data/pgmanual-02Sep2015.pdf>).

### Continuous Evaluation

IITK has a continuous evaluation system. This means that you will have two examinations and one or more quizzes in a four-month semester. Usually, the scheduling is as follows:

Mid-Semester Examination: after 5 weeks

End-Semester Examination: end of semester

The timing of Mid-Semester examinations and weightage may change a bit depending on wishes and conveniences of the Instructor.

Some Instructors may also take announced or unannounced (surprise) quizzes with some weightage. Other may use attendance criteria, or assignments, or ask you to submit term papers/project reports, or to give seminars.

You will find that, IITK places great stress on developing problem-solving skills in our students. As such, you will be required to solve a great many problem sets and assignments. Most instructors ask students to solve only problems in the examinations – there are usually no “theory” questions.

Please note that there is no study leave at IITK. You will have classes till the day before the examination. Quite often the material taught on the previous day will be asked in the examination.

It is essential, therefore, in this system, to prepare your daily lessons and work out your assignments regularly. So do not waste your evenings and holidays — time is precious in IITK.

### Grades and Performance

You may be aware that in IITK, you are given letter grades instead of marks.

In each course a student is registered, she/he earns certain approved credits and is awarded a letter grade indicating her/his overall performance in that course. There are ten letter grades: A\*, A, B, C, D, E, F, S, X and I. The correspondence between grades and points (on a 10-point scale)/rating is given below:

A\*: 10 A: 10 B: 8 C: 6 D: 4 E: 2 F: 0  
S: Satisfactory X: Unsatisfactory I: Incomplete

If a student fails a course, she/he will have to repeat it in a future semester: it is then called a backlog. Needless to say, you should make sure that you do not fail a course.

Each course has a fixed number of credits assigned to it. For example, most of the courses you will be taking have 9 credits. Every semester, each grade point is multiplied by the

number of credits and the total is then normalized (see the computation below). The result is called the Semester Point Index (SPI).

SPI Computation : If the grades awarded to a student are G1, G2 etc in courses with corresponding credits C1, C2 etc, the SPI is given by :

$$\text{SPI} = (\text{C1G1} + \text{C2 G2} + \dots) / (\text{C1} + \text{C2} + \dots)$$

In the above computation, courses with S and X grades are ignored. Similarly, the CPI indicates the cumulative academic performance in all the courses taken including those taken in the current semester. For details, see the PG Manual.

The minimum CPI requirement for continuing in the Ph.D programme or for graduation is 7.0. Failure to maintain a CPI above 7.0 will lead to a student going into the categories of Warning, Academic Probation and eventually Academic Programme Termination (which means the student will be expelled from the Institute). You will find more details in the PG Manual. So, if you realize during the semester that you are finding the pressure of courses too much, for whatever reason, it is advisable to contact your DPGC Convener or counseling section immediately.

### Unfair Practices

It is probably unnecessary, but nevertheless my duty, to tell you that unfair practices, such as cheating during examinations, copying assignments from friends etc. are viewed extremely seriously in IITK. If detected and reported to the authorities, you may be asked to sit out for a semester -- or more --- and this fact will be recorded in the transcript of your academic performance eventually issued by the Institute. Extreme cases may be recommended for Academic Programme Termination, which is the equivalent of expulsion or rustication.

If some of the above seems intimidating, just remember that the great majority of students who have joined the Ph.D. since 1965 have made good in their future careers and have never had to bother about such problems. Just keep attending classes, working regularly and interacting with the Faculty to clear your doubts, and you will find that everything runs smoothly. IITK regards you as our brand ambassadors and it is by your performance that we ultimately measure our success or failure.

With best wishes,

Sudeep Bhattacharjee  
CONVENOR, DPGC  
DEPARTMENT OF PHYSICS  
[sudeepb@iitk.ac.in](mailto:sudeepb@iitk.ac.in)

July 22, 2017