

# Indian Institute of Technology Kanpur

## Faculty Handbook

July 2017

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## Roadmap

Welcome to [IIT Kanpur](#)! Through this handbook we give you an orientation to various aspects of life at IIT Kanpur. We take you through our annual academic calendar, signpost the important events, and provide necessary information. Some of the academic and administrative duties follow a definite timeline and there are others that are applicable throughout the year. This handbook aims to keep you updated and vigorous but, along with this document, your other life-line would be to ‘ask a colleague’ since the guidelines-rules in place need to be deciphered and interpreted. First, we will work our way around an academic almanac. Let us assume that you have joined in the month of December. The classes begin late December or early January when it is cool and pleasant. We start our almanac from the month of January

### January

Your first task would be to teach, say, an undergraduate course. The three most important persons in this domain are the [Dean of Academic Affairs \(DoAA\)](#), the Chairperson, [Senate Undergraduate Committee](#) (SUGC) and, at the department level, the Convener of the Departmental Undergraduate Committee (DUGC). Similarly, for a postgraduate course, the functionaries would be [SPGC](#) and DPGC. UGs at our Institute are BT, BS, and BT-MT dual degree students, PGs are MT, MS, and PhD students. The DoAA office, specifically, the Associate Deans for UG and PG programs will answer many of your queries that will crop up during the semester. You might also need to coordinate with the Lecture Hall Complex office. January has few holidays and time will be spent in hectic teaching. For teaching related information, see Section 1.

You need to apply for a house, so refer to Section 3A for HAC (house allotment committee) rules. Keep your eyes open for emails containing information regarding the houses that are floated from time to time.

[Health Centre](#) and related Information are given in Section 3B. Do attend the ORIENTATION PROGRAM scheduled in the last week of January. It will expose you to the breadth of ongoing activities at our Institute. Director’s address is also scheduled around this time.

January is a foggy month and quite cold. Keep up your exercise and wear warm clothes.

### February

This is the month of a brief and beautiful season of spring in our part of the country. Enjoy the flower show at the nursery. Mid-semester examination is often scheduled in the last week of this month. Late January and early February is the period when [GATE](#), a graduate level test, is conducted. It may require you to travel on a weekend and supervise the conduct of the examination.

## March

You will be getting a mid-semester recess from classes in the second week and this might be a good time to write your Initiation Grant proposal. The information related to the Initiation Grant from [DoRD](#) is given in Section 2. This section also describes sponsored research, consultancy and other types of projects. By the end of March, teaching assignments of the following semester are finalized. You will see yourself teaching a course as well as tutoring one or conducted an instructional laboratory.

Remember that March is the time of financial year-ending, and has implications for accounts, purchase orders, taxes, projects, and the library budget (Section 2B). Therefore, you should always plan your purchases such that your purchase orders are placed before February.

## April

End-semester examination is scheduled in the last week of April. That makes the first three weeks quite hectic from the viewpoint of classes. For grading related information see Sections 1B and 1D. You can start using your CPDA (cumulative professional development account) for presenting research papers in conferences. The details are there in Section 2A.

## May

It is time for Masters and PhD admissions in your department. Look up the DPGC related information in Section 1. You will have to volunteer for screening applications, conducting written tests followed by interviews. It is now summer which is vacation time for students and you can plan a short sojourn. You may not be immediately eligible for leave travel concession. LTC related information and leave rules are given in Sections 3C and 3D. All leave application is through an online portal. Hopefully you have been allotted a house and you have moved in. Do get out of temporary quarters such as the [Visitor's Hostel](#) at the earliest.

## June

No classes but real time for catching up on manuscripts. If you are teaching a summer course you will, of course, be staying on. [JEE \(advanced\)](#) is scheduled in June and may require you to travel and participate in its activities. Still, it is a quiet month. Free of insects, you will be warmed by the summer sun, blessed by the clean ground water but also soothed by good mangoes!

## July

The first week may see monsoon showers, lowering of temperatures and a rise in humidity. The greenery of the campus bursts into life. Classes start in the last week and so you do have time to plan research for yourself and your students as well as proposals for early career awards. The June – July period can be used to write grant proposals for submission to various

funding agencies. Towards the end of the month, the first semester of the new academic year begins. A very short break before classes may do wonders. A new batch of students – undergraduates and postgraduates has joined the institute. You might be getting requests to be Faculty Guardian (Counselling Service explains this role). June-July is time for income tax return! (See Section 3H).

#### August –September

Classes are on and you will be busy with your course preparation. Keep aside 2-3 hours of time for a one-hour class. Preparation time, expectedly diminishes with experience, but not much. Director's address is scheduled in the first week of August. September will see a Teachers' Day celebration. You will start building a laboratory, procure equipment and think up new algorithms. You might also be made a warden of a student hostel. Participating in (almost all) institute activities is unique to us and has served well over the years. End of September will see the mid-semester exam scheduled. Both, question paper preparation as well as grading answer sheets are central to our profession. These are weighed seriously by our colleagues.

#### October

Mid-semester recess from classes. Catch up on the pending manuscripts! Dussehra is the major festival season in North India. Kanpur is in full swing and you may visit various Durga pandals scattered over the city. October is a festive time and you will feel the music in the air. The festival nearly coincides with the student cultural festival, Antaragni, which has several good cultural performances and competitions. Temperatures start falling and the weather is enormously pleasant.

#### November

Classes come to an end by the third week, and the first two weeks quite crucial for interaction with students. Do not feel burdened with students asking you routine questions (that, you feel they should know). Some questions will flummox you and set you thinking! The first week might see Diwali but go easy on the sweets for which Kanpur is notorious(!). Foundation Day (the birthday of the Institute) is also scheduled in the first week. End- semester examination is often for three hours making for a lot of grading. Grade submission is time bound and important. Students are allowed to see their graded answer sheets and you will have to answer queries and settle debates that will test your grading skills!

#### December

In early December, admissions for PhD students are conducted by the departments. December is conference time in India. You can make your plans for the December break, either to present a paper in a conference or be a part of one right on campus. Alumni functions begin in December and you will see a lot of movement from and to the guest house.

It is a short break, so make a realistic plan to achieve targets. It is cool but not cold and a lovely time in Kanpur! End of December may see fog creep in.

After a brief break from classes, you are ready to begin the second semester of the academic year. Now that you have spent a year, you will be able to advise newcomers like yourself on various facets of life at the Institute. Indeed, tell us about your experience as well and how it could have been improved.

## AT THE BEGINNING

Following the submission of a joining report, an order is generated by the Office of the Dean, Faculty Affairs (DoFA) announcing your arrival. You will also be assigned a unique PERSONAL FILE NUMBER with which you will be identified in the automation system. Action items at this stage are the following:

- Submit your updated CV in the DoFA office via [Pingala](#); the software is the one you must have used while applying for a faculty position at IIT Kanpur
- Fill up the form to get an Institute ID card
- Fill up the form for [Library](#) facilities and the [computer center](#)
- Others include the family declaration form ([medical](#) and [LTC](#)), [NPS](#), [immovable property declaration form](#), and the contract agreement if applicable.

If you are returning from abroad, please apply for a PAN card and the Aadhar card immediately. These are legal documents mandated by the [Government of India](#). They are also required for maintaining a clean record of income taxes.

Your original appointment letter is a permanent document that you should preserve for all times.

The Office of DoFA will have to be approached frequently in the initial stages for a few more details. Original degrees are first verified you have to submit a self-attested set of photocopies. The office will issue a letter of address-proof with which you can get a bank account and mobile number. Please fill up the attestation form needed for police verification. You can apply for reimbursement of return travel and also verify your service book entries. Service records of faculty members are maintained by the DoFA office in their respective service books with their Personal File (PF) numbers. All the major events relating to your official career, which have a bearing on your pay, promotion and leave are recorded in your service book along with the dates and the relevant authentication/ orders. Some of these are:

- i. Appointment and joining
- ii. Fixation of pay
- iii. Grant of increment
- iv. Revision in grade pay
- v. Grant of leave (application is through [Pingala](#), the Institute-wide automation system)
- vi. Deputation; long leave of absence

- vii. Promotion
  - viii. Hometown declaration
  - ix. Leave travel concession
  - x. Nomination
  - xi. You need to verify your service book every year in the month of August.
- You can take a look at your service book anytime by going to the DoFA office.

*Family Declaration:* Your spouse and dependent family members are eligible for many of the benefits such as health services and leave travel concession (LTC). There is a family declaration form that you are required to fill at the DoFA office on joining. After that, any information about changes in the family are intimated to the DoFA office. Other than your spouse, family members who qualify as dependents are:

1. Two surviving unmarried children
2. Parents whose income does not exceed Rs. 3500 per month including D.A. and from all sources including bank interest and other receipts. A copy of last IT return file may be required. Self-declaration certificate is essential.
3. Divorced, widowed, abandoned daughter who is wholly dependent and residing with the faculty concerned.

These are technical matters and the rule position can be interpreted by the Office of Faculty Affairs.

After you have a PF number, the following actions can be immediately performed.

- Apply for the medical booklet
- You need to go to the ID cell and get your identity card and the health booklet.
- Computer Centre will provide your log-in and (initial) password with which you can access email, internet, and other software-related services.
- Apply for permission at the [P K Kelkar Library](#).
- Do apply mobile connection and local bank account.
- Apply for PAN card and Aadhar.
- Apply for a gas connection (though, many houses have piped natural gas).
- Our campus is bicycle friendly You can buy a cycle from one of the cycle shops on campus.

## **Conduct Guidelines**

Faculty members play a disproportionately important role in the functioning of the Institute. As a result, our behaviour is closely watched and followed by the students who form the dominant group on campus and the staff. In the staff category, you will meet those who are technically qualified, those proficient in accounts and other dedicated services, computer engineers and staff engaged in full-time research. The term *faculty* is exclusively used for

those who participate in teaching full courses and guide students at various levels in their dissertation.

As a faculty member, you are expected to be honest, impartial in dealing with others, and sincere in your work. Make sure that you treat your students with fairness and respect and do not show any favouritism. It is important to remember that you are a full-time employee of the institute. Leave of absence requires prior permission and should be properly intimated to the Head of the Department and/or the Dean of Faculty Affairs, as appropriate. Please bring to bear your entire force and energies towards scholarly pursuits. The usual code of scientific and research ethics enforced worldwide will hold in our own research. It is especially important to be careful with inadvertent plagiarism (including self-plagiarism) in scientific communications and in the Masters and Doctoral theses of students. Faculty conducting projects have considerable flexibility in financial matters. Make sure that you follow the announced guidelines in financial transactions, such as project purchases, project appointments and salaries.

## Section 1 Teaching

The section is organized along the following lines.

1. Introduction: Philosophy of teaching, joys and challenges, freedom, rights and responsibilities, transparency in grading.
2. Courses: Type of courses- core, department compulsory, electives, science options- nature of courses - lecture, laboratory, mixed discussion, reading, credit system, grading system, course load.
3. Lectures, tutorials and laboratories
4. Course timeline: preregistration, registration, add-drop, deregistration, mid-semester exams, quizzes, end-semester exams.
5. Course management, [OARS](#)- Course registration, grade submission.
6. Course conduct: Teaching practices, notes, internet sources, showing of examinations papers, tutorials student tutors.
7. Course management systems: [Brihaspati](#)/ [Moodle](#)/ Piazza
8. Course discipline: Plagiarism, Cheating in exams
9. Administrative Structure: DoAA office and sections, manuals, Departmental committees
10. Academic programs and curricula

### 1. Introduction

Teaching plays an important role in our academic life at IIT Kanpur. Teaching can be both exciting and rewarding at times, but also intimidating and frustrating during other times. We place a very high importance on good teaching practices and ensure that a motivated teacher is provided with all the facilities and support needed for this purpose. Teaching at IIT Kanpur

is built around two pedagogical assumptions: (a) freedom of the instructor, and (b) a student-friendly and transparent system. These two points will become clear as you read along.

As an instructor, you have full freedom to conduct your course in the way that you deem appropriate. The nature of teaching and grading can be decided completely by you. This freedom comes with certain responsibilities that you must fulfil. Some of these are regular conduct of classes, clarity about grading schemes and last but not the least, mandatory showing of answer scripts of all exams and assignments. You must be accessible to students and let them flood you with questions!

Over the years, you would have developed a teaching style that you are comfortable with. However, you will frequently feel the urge to try new techniques, develop new courses, and make contributions to the curriculum. As you will find out, the institute provides you a comfortable framework for such innovations. The website of the Dean of Academic Affairs, (DoAA) is an excellent place to find information related to courses.

As you get ready for your first teaching assignment, we will give you a quote made by former colleague who was recognized by all as a very good teacher: IN ORDER TO BE A GOOD TEACHER, NOT ONLY SHOULD YOU LOVE TEACHING, YOU SHOULD ALSO LOVE YOUR STUDENTS.

## 2. Courses

As a rule, we teach 1.5 courses per semester (3 per year). Thus, each faculty teaches one full course per semester. In addition, there are other teaching responsibilities that add an additional load of about a half to a full course. These additional responsibilities could be in the form of tutorials, laboratory hours, or teaching portions of other full courses. Theory courses are conducted in classrooms, practical courses in laboratories, reading/ discussion based courses, and project based courses have more than one of these components. The intensity of a course at our institute is greater than average, requiring a student to spend up to three extra hours of studying for one lecture hour.

A typical lecture based course consists of 3 lectures per week, each 50 minutes long. For some courses, where it is desirable to have longer lectures, two lectures of 75 minutes per week are conducted. Some courses have tutorial hours (see Section 3 below), and/or laboratory hours, but typically, the total number of contact hours is between 3-6 per week. Teaching during summers is optional.

There are many different types of courses based on the target audience. At the undergraduate level, there are core courses typically taken by UG students in their first two years. Then, there are the compulsory department courses which are required for the UG students to secure a degree in his/her branch (department). The elective courses offer a choice to the student to take one of his/her interest. There are departmental electives wherein the student has choices of courses which typically change every year. Open electives are courses wherein the student from any department can register for it. Courses in [Humanities and Social Sciences \(HSS\)](#), comprising approximately 12% of the undergraduate curriculum are spread evenly across the students' programme. Offered in varied disciplines of Economics,



English Literature and Linguistics, Philosophy, Psychology, Sociology and Fine Arts, the objective of these courses is to sensitize students to alternative ways of knowing, and indeed of applying such knowledge. Finally, there are some courses called Engineering Science Option or Science Option which are taken by undergraduate students in their second year. In addition to the courses at the UG level, there are specialized post-graduate (PG) courses which can be both compulsory and elective courses but are mainly meant for PG students. The number of students per course can be greater than 400 for core courses and as low as 5 for some specialized electives. Before you get started preparing for the course, keep the target audience in mind. The number of students in the course often places constraints on the nature of grading possible.

The academic program at IIT Kanpur follow a credit based system of academics. For each course they take, they get a certain number of credits (C) calculated as follows:

$$C = 3L + T + P + X$$

where L= number of 50 minute lectures per week

T = number of tutorial hours per week

P = number of practical hours per week

X = additional credits as decided

X is typically zero but for some specialized project-based courses, X can be nonzero. Thus, for a 3L course, the student receives 9 credits. Graduation requirements are all counted based on credits. See the UG/PG manuals (Section 1) for more information.

The grading system at IIT Kanpur is letter based with grades given on a scale of 10 as follows:

A\*: 10 (Outstanding students get a \* mentioned in their transcript.)

A: 10; B: 8; C: 6; D: 4

E: 0 (Fail, but allowed to attend courses for which this one is a prerequisite)

F: 0 (Fail)

S: Satisfactory (typically used for thesis credits)

X: Unsatisfactory (used for thesis credits)

Thesis credits are part of the requirement for many post-graduate programs. Thesis grades are either S or X and the student is required to accumulate sufficient S grades before graduating.

### 3. Lectures, Tutorials and Laboratory

One-hour lectures are usually 50 minutes long. The instructor has a choice of using blackboard or other presentation facilities. Classes are held either in the Lecture Hall Complex (LHC) or in classrooms located in various laboratories, or in classrooms in departments. Most of the lecture rooms typically have projection facilities, microphones, etc. For larger classes with many students, the lectures are supplemented with tutorials in which smaller groups of about 40 students are given more focussed attention. Tutorials for core

courses are usually conducted in the tutorial block of LHC. Some courses also have a model of tutorials wherein about 100 students are tutored simultaneously with multiple tutors. Laboratory hours can be scheduled either in the morning 10 am -1 pm or in the afternoon from 2 – 5 pm. The first year UG students and other science laboratories are held in the new Core labs building in the northern part of the campus.

Course timings are set centrally so that the students do not have clashes among courses. For this reason, it is important that the assigned timing is followed. Occasionally, it is possible to take extra classes to make up for those missed due to some other essential work. The total duration of the academic semester is about 14 weeks. Thus, a typical lecture course has about 40-42 lectures.

#### 4. Course Timeline

The timeline for a course begins the semester prior to the teaching of the course. Towards the end of the semester, students pre-register for courses for the following semester. During pre-registration, the course instructor can decide whether or not to accept students into a course. In general, the instructors are expected to accept interested students. However, there may be constraints such as the total number of students or prerequisite knowledge in which case the instructor can set up rules for selecting students to the course. Pre-registration is done online using the office automation system called OARS (Sec. 1E). OARS is also used for accepting/rejecting students from the course. Once the course is announced, an email alias for the course is generated by which you can contact all the students in the class.

The first lecture of the course is a good time to give the students the contents, text, reference materials and the grading scheme to be followed and any other information regarding the conduct of the course. You should check with the library and the bookstores in the shopping centre to make sure that the reference materials that you suggest are easily available. You can also request the library to keep certain number of copies in the reserve section (see Sec. 3H). During this week, the students often decide whether to continue in the course or take another course instead. The last date for adding/dropping courses is typically a week into the semester. For this reason, the first few days of classes are very important and instructors are expected to be present during that time.

Half-way into the semester, a mid-semester examination is held. The mid-semester examinations are held for all courses during one stipulated week. A mid-semester recess for a week coincides with the festivals of Dussehra and Holi. During this break, no classes are held. The end-semester examination is held at the end of 14 weeks of classes. The end-semester examinations go on for about 10 days. The final grades for your course are to be submitted between 3-5 days after the date of the examination of your course depending on the number of students in the class. Before submitting grades, do show the final examination copies to the students. The examination copies should be saved for two additional semesters.

If students miss the end-semester examination for a genuine reason, they may request a make-up examination through the Academic Affairs office. The list of students for whom

make-up examination has to be conducted is sent to the instructors along with the date of the make-up examination. Make-up is held a few days after the last end-semester examination. If a student misses the mid-semester examinations or quizzes, it is the instructor's choice as to how he/she compensates for the missed examination. The instructor may require a make-up exam or any other discretionary measure.

## 5. OARS

[Online Academic Registration System \(OARS\)](#) is an online tool that provides instructors and students an efficient way to manage their courses. As an instructor, you will be using OARS for matters related to all official records for the students of the course. The website of OARS shows various modules depending on the activity you wish to perform. We list some of the common actions that you will be performing using OARS.

1. Pre-registration: Students (except new students) pre-register for courses that they will study the following semester. OARS will let you see which students are preregistering for your course. Further, depending on the student, you may be able to accept them into the course, reject them (if the class size becomes excessive) or ask them to meet you regarding the course. OARS will show you the student's transcript for your reference. In addition to the student list, OARS shows the location and venue of your course.
2. Registration/Add-Drop: During registration and add-drop week, OARS will add the students who are registered for your course. After this, OARS will allow you to see all the students in your class and any changes in the list of registered students will be jointly reflected in the OARS list.
3. Grade submission: Faculty may submit their grades online using the OARS grade submission module which is activated during the week of the end semester examination.
4. Other information on OARS: There are specialized modules for the DUGC/DPGC (see Section 7). Other than that, OARS provides you with the list of all current courses in the institute, their venues and timings. This is especially useful for deciding the courses that your PhD student has to take, or for attending courses of interest to you.

## 6. Course Conduct

You, as the instructor have considerable freedom to conduct the courses in a manner you feel is in the best interest of the students. However, there are some basic guidelines that have to be followed. It is expected that you will take all the stipulated classes at the prescribed venue and time. However, due to some reason, if you have to reschedule classes, then, it is expected that you choose a suitable time with the consent of all the students in the class and inform the schedule well in advance. You should clearly mention the grading scheme that you plan to follow at the beginning of the course. All examinations/quizzes and projects should be returned to the students in a reasonable time.

Sometimes, instructors find it useful to give their course notes, either by putting them online. These sites are also useful for putting up practice problems and their solutions. Some instructors like to email notes to students using the course email alias. Alternatively, some instructors like to put their course contents in the Brihaspati site (Sec. 1G).

If you are the instructor for a course that has a tutorial component, then you should give instructions to the tutors on what they should cover in their tutorials. Sometimes, practice problems are given to the class and the tutors work them out. Other times, tutors are requested to explain certain concepts that were not cleared in class. It is especially important to work closely with student tutors and give them clear instructions on what to do during the tutorials. It is also useful to have a meeting of all tutors involved in your course midway between the course, to get a feedback from the tutors regarding the course and the tutorials.

During examinations, it is imperative to ensure that there are sufficient number of invigilators in each classroom in which the examination is being conducted. Students should be given clear instructions and any (reasonable) doubt raised during examinations should be clarified. Extreme care should be undertaken while grading examinations since an error of a few marks can change the grade of the student. Furthermore, having a fixed grading policy for each question in your exam paper is important for maintaining consistency in grading; this is especially important for courses with a large number of students.

## 7. Brihaspati

[Brihaspati](#) is an online course management system that allows you to interact with your students in various ways during the course. It can be used as a repository for course notes and assignments. It can also be used to conduct online examinations and show grades to the students. It has many other functionalities, for example, a discussion board, notice board to post important notices, and a chat site.

It is optional to use Brihaspati for your course. Before the beginning of the semester, you will be registered as an instructor in Brihaspati, and all your students will be registered. Other free course management systems such as Piazza and Moodle are also popular.

## 8. Course discipline

As an instructor, you are responsible for conducting the course in a manner that is fair to all the students. This means, that you reward the good students appropriately, but also take action against the students who do not follow the guidelines. These courses are used as training for students, and it is important that they are aware of the consequences of any improper action.

If you ask students to write a project report as a part of your course, it is important to alert students to the dangers of plagiarism. There are many plagiarism checking software packages that are available and the institute is looking to purchase a licences for one of them. Please check with the [Computer Centre](#) regarding its availability. All project reports and theses should be passed through this software to detect any plagiarism.

If you find other cases of indiscipline like cheating in examinations, you are expected to take appropriate action. The institute gives freedom to the instructor in this regard. You can penalize the students by deducting marks, reducing grades or failing in the course, as per a pre-announced policy. If the issue is serious, please report the matter to the Academic Affairs office.

Institute attendance policy: In case you find that some students are not attending classes continuously for a period of four weeks, you can request them to be deregistered from the course. On the other hand, you may be called for a project proposal meeting or an important conference and you may be required to miss a class. In the academic environment that we have cultivated, *we ensure that every class is engaged*. As a result, you have the following options. Make-up for the class missed on an evening or a Saturday as convenient to students. You may also send a replacement faculty if that person is quite familiar with the subject.

#### 10. Administrative Structure and Manuals

The Senate is the highest academic decision making body of IIT Kanpur. It works through two Standing Committees, [Senate Undergraduate Committee \(SUGC\)](#) and the [Senate Postgraduate Committee \(SPGC\)](#). The two committees are representative bodies with membership from across the departments as well as nominees of the Senate. SUGC and SPGC are headed by Chairpersons selected from among their members.

[Dean of Academic Affairs \(DoAA\)](#) is the person in charge of academic matters, and heads the academic office of IIT Kanpur. The academic office has two main sections, the undergraduate (UG) section and the postgraduate (PG) section. All matters related to BTech, BS, MS and MSc(2yr) students are handled by the UG section. All matters related to MTech, MDes., MBA and PhD students are handled by the PG section. The standing committees of the Senate, SUGC and SPGC work from the UG and the PG sections respectively. The OARS office is also located in the academic affairs building (informally called the JEE-GATE building).

The UG and PG manuals give detailed information regarding all aspects pertaining to the academic governance of UG and PG students respectively. These include program guidelines, conduct of courses, change of branch, masters and doctoral theses, minimum academic standards, and discipline.

The Statutes and Ordinances of the institute also have a lot of useful information regarding academics.

The Head of the Department is responsible for all course assignments (lectures, tutorials, and laboratories) to the concerned faculty. There are two committees in each department, the Department Undergraduate Committee (DUGC) and the Department Postgraduate Committee (DPGC) which take care of all matters regarding UG/PG students within the department. The DUGC/DPGC conveners of each department are members of the SUGC/SPGC.

## 11. Academic programs and curricula

The academic programs of IIT Kanpur are broadly divided into [Undergraduate \(UG\) and Postgraduate \(PG\) programs](#). The UG programs include the 4 year BS/B Tech degrees. Some of the BS/BTech student may opt to continue for a Masters' degree and will migrate to the PG program. The PG programs include MTech, MSc, MBA and M Des and PhD. In addition, some departments have an integrated MSc-PhD program. The list of all academic programs is available on the DoAA website and detail can be obtained from the PG manual.

The curriculum for each of these programs is specified in the UG/PG manual. The BTech/BS programs consist of core courses, engineering and science options, department compulsory courses, and elective courses in the department (including research projects), humanities and social sciences, and other departments. The MSc and MTech programs primarily consist of departmental courses and electives. The MSc program culminates in a research project. MTech program involves a substantial thesis component which requires about a year of research work. The PhD program involves about a year of course work followed by research, with various examinations and presentations included as part of the program.

## Section 2: Research and Related Facilities

This discussion is organized along the following subsections.

- A. Research timeline
- B. Initiation grant
- C. PDA (Professional Development Account)
- D. CPDA (Cumulative Professional Development Account)
- E. DPA (Departmental Promotional Account)
- F. Proposals and sponsoring agencies
- G. Stores and Purchase Management
- H. Institute Research and Development Committee
- I. Research Centres
- J. P.K. Kelkar Library
- K. Computer Centre
- L. Office of International relations

What follows is just a glimpse. A considerable amount of factual information is also available on the Institute website.

### 2A. Research Timeline

Research is an important component of academic activity for a faculty member at IIT Kanpur. Today, we are a well-recognized centre of academic excellence. This has been possible because of several factors and also because of the environment and support provided

by the Institute to the individual faculty. Some important components that you need to be aware of are listed below.

For detailed information, check out the website of “[Office of Research & Development](#)”. The R&D office has an online manual that one may find useful. As a new faculty, it is expected that you get quickly acquainted with typical research milestones. Depending on the nature of research, your requirements will vary.

In order to organize research expenditure, you have to open what are called project account in the R&D office. All transactions to the project account are entered in this account. Typically, you will have multiple project accounts at any given time and there will be separate accounts for each of them. These accounts can be viewed online through the office automation portal. In addition, certain transaction on the pages can be carried out online to reduce time and effort. As you get into your research career, you will learn and appreciate the resources provided by the office in terms of project management.

### **FIRST THREE MONTHS**

**2B Initiation Grant:** The idea of the initiation grant is to get your research activity started immediately. In order to activate purchases and spending, you need to open an initiation grant project account at the office of R&D immediately upon joining. A sum of Rs. 3 lakhs will be transferred to that account. Subsequently, you should prepare a detailed research proposal of up to Rs. 22 lakhs and submit names of 3 referees in the research domain. If you have any special requirement of equipment, please consult the Dean.

Once the report of the referees is available, you will be asked to defend your proposal before a committee consisting of an administrative committee of Deans and your department Head. Whenever required, the committee can have special invitee(s) to assist the evaluation process.

The following budgetary heads will be opened when a project is initiated: consumables, contingency, equipment and travel budget and overheads (when money is received from external sources). You need to go the R&D office to submit the form for opening the project with all the various heads whenever the initiation grant or any other project is opened.

Early career research grants are also provided by government funding agencies such as [DST/SERB](#), [DBT](#), and [BRNS](#).

### **2C Professional Development Account (PDA)**

The PDA account is useful and carries flexibility since it is a buffer for various research-related activities. If you carried out sponsored research or consultancy, part of the overheads from the project will be transferred to your PDA account. Part of the money raised for outreach activities such as short courses can also be directed here. PDA gets enriched when you participate in [JEE](#) and [GATE](#). You can request the R&D office to open your PDA account soon after joining.

PDA can be utilized for the following purposes:

1. Purchase of equipment.
2. Travel (within the country and abroad) for research or related discussion.
3. Conference related payment such as registration fees.
4. Purchase of books, journal subscription, professional membership.
5. Teaching material, books, and teaching aids such as software.
6. Recruitment of qualified staff.
7. Any other expenditure with the approval of DoRD.

As a PDA is treated like a project, all purchases shall be made following the Institute purchase rules for projects. No honorarium can be drawn from this account.

#### 2D Cumulative Professional Development Allowance (CPDA)

A Cumulative Professional Development Allowance (CPDA) for Rs. 3 lakhs for every block of 3 years (Rs. 1 lakh per year) may be made available to you to meet expenses for participating in both national and International conferences, paying the membership fee of professional bodies and contingent expenses. The current block for CPDA started on 1<sup>st</sup> April 2017. Faculty who joined the Institute in the middle of the block period will be eligible for their CPDA calculated on a quarterly basis.

CPDA can be used for:

- a) Reimbursement of travel expenses related to national and international conferences through poster or contributed papers, or as a keynote/invited speaker.
- b) Paying membership fees of various professional bodies.
- c) Purchase of books/monographs/journal subscriptions/computer software/data bases.
- d) Meeting various contingency expenses as per approved norms.
- e) Reimbursement of telephone/mobile charges.

#### 2E Department Promotional Account (DPA):

In addition, to your PDA, your department has additional resources (called DPA) that is grown by the collective activities of the faculty. It is primarily a resource for research. The account is operated by the departmental head.

DPA can be utilized for the following purposes:

1. Taxi fare, travel reimbursement to guest visiting the department.
2. Telephone charges.
3. Purchase of equipment for the department/laboratory.
4. Contractual payment for work assignment.
5. Office administrative expenses (example, stationery and cartridge).

Documents related to PDA and DPA can be seen on the R&D webpage.



DoRD online is a portal that allows you (the principal investigator or PI of the project) to view project details such as receipts and expenditure, advances request, and details of project employees. DoRD online is a part of the [Office-Automation portal](#), which serves as a single point for many of your personal and official information. You can access it on the Office-Automation link from the main page of the Institute webpage. There is an informative [help](#) document that you can access after logging in. You can also obtain information related to your salary, research accounts, and CPDA, all in one place. You can file for advances for various consumable, non-consumable purchases and also for TA/DA when undertaking a journey related to project.

### **NEXT SIX MONTHS**

2F Proposals, sponsors and funding: Research spans the esoteric to the most highly immediate, fundamental to truly applied. Research carried out should regularly be submitted to good journals and published so that the work is peer-reviewed. Seeking financial support for research is a second way of having our work continuously evaluated and discussed. Financial support also supplements the Institute income and helps us acquire specialized equipment, apart from additional financial support for the graduate students.

The scope and scale of research has substantially evolved from the era of student theses to funded projects to interdisciplinary research programs. Apart from journal and book publications, the Institute also aims at innovation and technology development. There could be academic and research collaborations with universities, governments and the industry to meet the immediate as well as the long term needs of the society. Close dialog with the industry is often ignored but cannot be over-emphasized.

The term sponsored research (or project) is used for those where financial support is available for instruments, staff salaries, consumables and travel. In contrast, consultancy refers to an activity wherein a part of the payment is intended for the investigator. Sponsored research is often long-term and futuristic wherein you stand to gain the most, in academic terms, for example, publications. Consultancy projects will exploit your present level of competence and focus on short-term objectives.

Funding Agency: There are several national and international funding agencies that you can approach for projects. You need to learn about these funding agencies in terms of their mission, research priorities, available financial resources, and current announcements. You should initiate interaction with the programme manager and seek required information. You should visit the funding agency, if necessary and volunteer to serve on the review panel.

From time to time there are invitations for projects from various agencies that are circulated by the Dean R&D in your department Head. When you apply for a project, you will typically be required to write a research proposal and provide details on the estimate of funds required.

While making an estimate of the funds required for a project, the following budget heads should be taken into account:

- (a) Salary of project staff including PhD scholars
- (b) Equipment
- (c) Consumables
- (d) Travel (domestic, international)
- (e) Contingency
- (f) Overheads (@20%)

Overheads Policy: For the services provided, including space, water, electricity, and security, as well as centralized facilities such as the [computer centre](#), library, and workshop, the Institute collects overheads from sponsored and consultancy projects. These overheads also help in efficiently running the R&D office.

Employees on project: Institute allows various scientific and researching as well as technical staff for proper completion of various projects. The salary guide for these can be found on the DoRD website.

#### 2G Store and Purchase Management

All items purchased under project are the property of the institute, though they are to be used primarily for the course of the project. You are required to use institute-approved procedure to make purchases, small and large. After the project terminates the equipment and instruments remain with the institute, unless there is a specific provision or requirement of returning them. Consequently, each items purchase is recorded in the asset register. The BOG approved guidelines for store procedures can be found in the store and purchase manual.

Quite conveniently, one can make direct purchases of up to Rs. 50,000/-. For more expensive items, whether indigenous or imported, one has to go through the process of inviting tenders from various vendors.

#### IN THE LONG RUN

Your long term goals of research may involve purchase of large equipment, institute level research planning and interdisciplinary research centres. We list below some ways of participation in these aspects. There are many other plans that you may have for your long term research goal and this list is by no means exhaustive.

Committee for Acquisition of Research Equipment (CARE): Major equipment in the areas of research where a long-felt need exists or for new thrust areas of research is the main focus of the CARE scheme. Proposals for purchase of major research equipment are invited from the concerned group of faculty drawn from across the Institute. Every year, a typical amount of INR 2.5-3 crore is available for CARE scheme.

2H Institute Research and Development Committee (IRDC): IRDC has been constituted with the Board-approved mandate and responsibilities of providing impetus to the Institute research and development activities and to provide support, advice and assist the DoRD. It has representation from all departments and inter-disciplinary programs. The body has become a vibrant entity to discuss policy issues and the Institute receives here the first level feedback from the faculty. IRDC members highlight shortcomings in procedural matters and thus sharpen the performance of the Office of R&D.

2I **Research Centres:** There are various research centres created to aid inter-disciplinary research and to provide infrastructure. Some of these are:

[Centre for Environmental Science & Engineering](#)

[SAMTEL Centre for Display Technologies \(SCDT\)](#)

DST unit on [Nanosciences](#):

Space Technology Cell

[SIDBI Innovation & Incubation Centre \(SIIC\)](#):

[National Information Centre of Earthquake Engineering \(NICEE\)](#)

[Computer Centre](#)

[Advanced Centre for Materials Science \(ACMS\)](#)

[Centre for Lasers and Photonics \(CELP\)](#)

[Centre for Mechatronics](#)

[National Wind Tunnel Facility \(NWTF\)](#)

[Advanced Imaging Facility](#)

[National Center for Flexible Electronics](#)

## 2J Library

The main Library of IIT Kanpur is the [P K Kelkar Library](#), also referred to as the central library. The library is housed in a three storey building which is centrally air-conditioned and has a seating capacity of more than 500. Historically, it is the first building to appear in the academic area.

The Library is open 358 days of the year and it is only closed on national holidays. The library hours are from 8am to midnight on all working days; 9am to midnight on Saturday; 9am to 5:30pm on Sunday and Gazetted holidays. The library is open 24 hours during the two examination of each semester.

Library has installed and implemented a web centric integrated library management software package called Libsys Premia to run all housekeeping operations. It also provides web based access to various bibliographic/ full text databases. As a faculty, you can borrow 20 books each semester. The library is a rich collection of books (including e-books), periodicals, abstracting and indexing periodical, microform and CD-ROM databases, technical reports, standard and thesis. Each year, about 5000 books and journal volumes are

added to the collection. New collections are displayed on the library notice board every week and a weekly email notification is sent to all faculty members.

Each year, about five thousand books, journals and volume are added to the collection. The domain-wise breakup of the library's collection: 31% Science; 33% Technology; 21% Humanities and Social Sciences; and 15% other areas.

In addition, you can request purchase of relevant books for the course you are engaged in, for research, and as general reading material.

#### Text Books in the Reserve Section:

As an instructor in a course, you can use the library resources in different ways. You can request a certain number of copies of the main text book and reference material to be put in the reserve section of the library, so that it is always available to the students. The books in the reserve section are for used by students within the library and are issued for only two hours at a time.

Reference tools: Library has a good collection of reference tools, such as encyclopaedias, manuals, dictionaries, yearbooks, hand books, directories, almanacs and bibliographies. These are kept on the first floor for consultation only. These collections are continuously updated with new tools and editions and supplements to old ones, in order to provide the latest on the subject. Old edition, multiple copies of reference manuals, handbooks, and yearbooks prior to 1980 except the encyclopaedia have been shifted to basement due to space constraints.

Theses: MTech, MDes and PhD theses submitted by the students of this institute have been digitized and stored in the electronics thesis database. This collection has reached more than thirteen thousand in DSpace institutional repository (IR) and is accessible on internet.

Periodicals: The library has a large collection of periodicals. The collection of back volumes of periodical is divided into three sequences which are the basement and on the top floor in the library.

- Compact shelving sequence consisting of periodicals up to 1970 (basement).
- Indexing and abstracting journals (basement).
- The bulk of other back volumes have been placed on the racks in single alphabetical sequence (top floor).

The library has paid the subscriptions to many archival packages and individual journals (online versions) which are accessible on our IPs to our user community. Some of them are: AIP Package, Science, Scientific American, Nature, IOP Archives 1998 – 2008, Annual Reviews (13), 1832- 2007, ASME- 25 archived journals, SIAM journals, Sage HSS package containing 453 journals, Lecture Notes in Computer Science, Lecture Notes in Mathematics, Lecture Notes in Physics, Blackwell reference online containing 476 reference E-books,

American Chemical Society – legacy archives, Royal society of chemistry 1841- 2007 , synthesis, foundation and trends in communication and information theory, foundation and trends in signal processing, foundation and trends in networking, foundation and trends in human computer integration, ANZIAM journals, Bulletin of the Australian Mathematical Society, Ergodic theory and dynamical system, ASCE journals, international journal of graph theory, Software: practice and experience, International journal of numerical method in fluids, Advances in organometallic chemistry, and 314 Wiley journals 1997- 2013.

INDEST-AICTE: IIT Kanpur is a core member of the INDEST-AICTE Consortium which provides various electronic resources including full-text and bibliographic databases. Around 10,000 plus journals are available through INDEST-AICTE Consortium.

## 2J Computer Centre

Computer Centre (CC) caters to the computational and IT related needs of the academic as well as residential community. The main facilities provided by the CC are:

- a) Institute 1 Gigabit LAN (Local Area Network) with more than 15000 nodes covering Academic Area, residential area and student hostels.
- b) Email facility to over 8000 users. Effective spam filters handle almost 3.5 lakh email per day of which an estimated 90% are spam.
- c) Linux (220 machines) and Windows (150 machines) laboratories for teaching of core courses (such as TA101) and general use by students.
- d) High Performance Computing consisting of 479 nodes HP cluster, MIC cluster, and others for research in diverse areas such as multi-scale modelling, FEM, computational chemistry, and thin film dynamics.
- e) Various software for specialized research and general use are also maintained by CC.

Computer Center has three state-of-the-art Data Centres with precision air conditioning for housing all the CC facilities as well as large clusters of the project PIs, office automation servers, telephone exchange and other institute servers. CC facilities are backed up by a 300 KVA UPS and 500 KVA diesel generators for 24 hours uninterrupted supply.

## 2K Office of International Relations

The office was created with the following objectives:

- a) Facilitate and manage memorandum of understanding (MOU) and agreements (MOA) with a foreign university.
- b) Establish joint degree programs.
- c) Enhance student exchange programme.
- d) Facilitate interaction of faculty, staff and students of IIT Kanpur with their foreign counterparts.

As a result of this initiative, we have several contacts and collaborations with leading institutes around the world.

### **Section 3: Services and Benefits**

#### **3A. [Estate Office](#)**

Allotment of accommodation: We are a residential Institute and the faculty is provided housing of types III, IV, or V as per their eligibility and subject to the availability of houses. Some of the single bedroom apartments (SBRAs) are also earmarked for temporary allotment to the academic staff. In case housing is not immediately available, accommodation can be provided in the [Visitor's Hostel](#) for a temporary period. Rent is charged according to the type of accommodation allotted. The allotment of house is done by the Chairman, House allotment Committee (HAC-1) through the Estate Office.

Guidelines for the allotment of Types III, IV and V houses: A person will be deemed eligible for a particular type of house on the date, henceforth referred to as the "Date of Eligibility", he/she attains the minimum Grade Pay (GP)/Academic Grade Pay (AGP), as listed below:

Type of House Eligibility (Minimum GP/AGP)

V	Rs. 10,000/-
IV	Rs. 7,600/-
III	Rs. 5,400/-

#### **3B. [Health Centre](#)**

The Institute has a thirty-bedded Health Centre equipped with an in-house pharmacy, physiotherapy unit, X-Ray facility and cashless pathology.

The Health Centre, besides providing routine OPD consultation, morning and evening and 27/7 Emergency Services by regular Medical Officers, also runs Dental and Ophthalmology clinics. The Health Centre has efficient referral services with reputed Consultants, Diagnostic Centres and Hospitals empanelled in the referral list to deal with emergencies. Empanelled referral services are reimbursable.

Additionally, Paediatrics, Orthopaedics, ENT, Psychiatric, Skin, Medicine and Cardiology OPDs are conducted by senior consultants of the city. Automation of OPD services is being carried out.

Medicines prescribed by the doctors can be sought from in-house pharmacy, open round the clock and in case of non-availability, they can be procured from a cashless pharmacy, being run separately in the Health Centre.

For details regarding services provided by the Health Centre, including medical reimbursement, you can refer to its website.

### 3C. [Leave rules](#)

Please read the document available on the Pingala website.

### 3D. LTC for Fresh Recruits

Those who are newly recruited by the government are allowed to travel to their home town along with their dependent family members on three occasions in a block of four years, and to any place in India on the fourth occasion. This facility is available to the faculty only for the first two blocks of four years after joining the government for the first time. The blocks of 4 years shall apply with reference to the initial date of joining even if the employee subsequently changes job within the government. The existing blocks will remain unchanged but the entitlements of the new recruit will be different in the first eight years of service.

BLOCK I first 4 years after the first year of service	
Year of Service	Admissibility of LTC
I <sup>st</sup> Year	Nil
II <sup>nd</sup> Year	Hometown LTC- once
III <sup>rd</sup> Year	Hometown LTC- once
IV <sup>th</sup> Year	Hometown LTC- once
V <sup>th</sup> Year	Any place in India LTC- once (also available to dependant family members)

BLOCK II next 4 years of service	
Year of Service	Admissibility of LTC
VI <sup>th</sup> Year	Hometown LTC- once
VII <sup>th</sup> Year	Hometown LTC- once
VIII <sup>th</sup> Year	Hometown LTC- once
IX <sup>th</sup> Year	Any place in India LTC- once (also available to dependant family members)

LTC after 9 years of service in a block of 4 years	
Block I- Two Years Block Year I & II	Hometown LTC – once
Block II- Two Years Block Year III & IV	Hometown LTC- once

Note: 'Any place in India' LTC can be availed only once (in lieu of home town) in a block of 4 years. Current block of 4 years is 2014-2017. There are intricacies in the application of these rules and you are advised to consult the office of DoFA before making specific plans.

### 3E New Pension Scheme

Govt. of India, Ministry of Finance, Department of Expenditure have introduced in their OM No. (1)(T)(2)/2003/TA/19 dt.14.1.2004 & 4.2.04 a new defined contribution pension scheme replacing the existing system of defined benefit pension system. The New Pension Scheme has come into operation with effect from 1<sup>st</sup> January 2004 and is applicable (mandated) to all new entrants to government service except to Armed Forces joining service on or after 1<sup>st</sup> January 2004. Important features of the New Pension Scheme (NPS) can be seen on the webpage of the [finance officer](#) on the institute webpage. At the time of joining, please collect the subscriber registration form for joining the National Pension System. After filling, please submit the form in the pension unit of the accounts section. In a few weeks, you will be given PRAN, a permanent retirement account number and monthly deductions from your salary will commence.

### 3F Institute salary structure

*The salary structure is well-explained in the offer letter issued to you.*

### 3G. Benefits (Insurance/ health coverage/loans/tuition reimbursement)

#### Post-retirement medical scheme (PRMS)

This scheme is primarily meant for providing support for hospitalization to the retired employees. This scheme is also a voluntary scheme. The monthly subscription for faculty is Rs. 150/- per month at this point of writing. It is compulsory for the newly joined faculty and the subscription will be recovered from the salary.

#### Children Education Allowance:

Under this scheme an employee can avail reimbursement of Rs. 1500/- per month, per child, subject to the annual ceiling of Rs. 18000/- per child (up to maximum of two children). This includes the expenditure such as tuition fee, admission fee, laboratory fee, special fee charged for agriculture, electronics, music and any other subject, fees paid for use of any aid or appliances by the child, library fee, games/sports fee and fee for extra-curricular activities, cost of one set of text books and note books, two sets of uniforms and one set of school shoes.

Hostel subsidy will be reimbursed up to the maximum limit of Rs. 4500/- per month per child subject the maximum of two children. However, the hostel subsidy and children education allowance cannot be availed concurrently.

Under the scheme, reimbursement can be claimed once in every quarter in the prescribed format which will accompany the self-certified original receipt in support of the claim for reimbursement. The claim for reimbursement per quarter may vary but the total should not exceed the maximum annual ceiling prescribed.



Reimbursement of children education allowance and hostel subsidy will be applicable for expenditure of school going children only i.e., first to twelfth. This reimbursement is taxable under income tax rule.

Loans and advances:

As a faculty of IIT Kanpur, you are eligible for a number of advances for various purposes. These are typically low-interest loans that can be repaid over a long period of time. The rules applicable for these loans are the same as they are for all central government employees. Details of other types of loans can be obtained from the [Accounts Section](#).

Home advance:

Faculty is eligible for loan towards purchase or construction of a house or an apartment. After ten years of service, the loan can also be used for purchase of a plot and construction of a house thereafter, or to enlarge an existing house.

The amount is limited to INR 7.5 lakhs. {Such numbers are, of course, periodically revised.}

Repayment: Up to 240 monthly instalments. The first 180 will be used for repayment of the principal and the last 60 will be for repayment of interest.

3H. Faculty forum

This forum represents the interests of the faculty across all departments, IDPs and centres. All members of the faculty (professor, associate professor, and assistant professor) including visiting faculty of the institute, by virtue of their positions, are members of the faculty forum. Its role is to promote freedom of thought and expression, ensure wide faculty participation in the formulation and implementation of educational policies, evolve ways and means for the redressal of faculty grievances and promote faculty welfare.

## **Section 4: Community Life**

An interactive history of Kanpur

It is significant that Kanpur lies on the banks of the river Ganga and imbibes the Shaivite traditions of our civilization. The Kanpur area has been inhabited from earlier times, but today's city is largely a legacy of the colonial era. Nearby areas with ancient connections include the river-side town of Bithoor (14 km from IIT). It is widely believed to have been the site of Valmiki's Ashram – Rama on his way to exile is believed to have crossed the Ganga here. Another area, Jajmau, has been inhabited since ancient times. In the late 1980s the riverside mounds at Jajmau were dug up for the Lucknow highway bridge, and layers of artifacts were discovered. This includes some pottery which has been carbon-dated to 1200 BCE. The brick temple at Bhitargaon, 50 km from here, is from the Gupta period (5th c. AD). It is one of the earliest brick temples in India. Speaking of temples, the temple complex in Shivala and the relatively new J.K. temple are notable.

By the 1700s, this was a crossing point on the Ganga, with records of several queens of Mandi having bathed in its ghats. In 1765, the forces of Shuja-ud-Daula of Awadh were defeated by the East India Company in a battle near Jajmau. From 1771, a garrison of Company soldiers were stationed at Kanpur. By 1775, the new Nawab Asaf-ud-Daula, was paying Rs. 2.6 lakh per month to maintain the garrison at Kanpur, ostensibly for protecting Awadh from Maratha incursions.

A charming Persian novel, *Nashtar*, was written at Kanpur in 1790 by Hasan Shah. It is among the earliest modern Indian novels in any language. It describes the British officers conversing in Persian and Hindustani to the extent of being able to understand Hafiz lyrics sung at dance performances.

In 1801, seven districts of Awadh were ceded to the British, and Indigo plantations were set up along the river. The cantonment began to grow, and with increasing British presence, Kanpur emerged as a center for manufacturing European-style items such as hats, gloves, tents, and saddlery.

Opium was also big, and you can visit the large compound on GT road today, called 'Afim kothi'.

In 1837, there was a devastating famine in which one of ten (~8 lakh) people died in the region from Agra to Farrukhabad. To improve irrigation, the Ganga canal was built in 1856. It runs just behind the IIT campus and amazingly attractive. Its access is, however, limited.

1857: It was during the insurrection of 1857 that Kanpur (Cawnpore) entered the history books of the British Empire. Four hundred Britishers, (half of them women and children), and about a million Indians were killed in this region. It was at nearby Kalyanpur that on 6 June 1857. Nana Rao convinced the mutineering sepoys to head back to Kanpur instead of marching to Delhi. Read Manohar Malgonkar's brilliant narrative on the subject in his novel, *A Bend in the Ganges*.

The Sarsaiyaghat where many British soldiers were killed-known as "Massacre Ghat" till 1950 – is next to the army golf course in the cantonment.

In the years after 1857, Kanpur grew rapidly as an industrial centre. The first textile mill (Elgin Mills) was set up in 1861. A number of factories came up, resulting in a large influx of workers from the villagers. The railways gave further boost in the 1870s, replacing the river-borne avenues of trade. Kanpur rightly earned the sobriquet, "Manchester of the east".

Initially factory ownership was largely British, but by 1920, a number of Indian-owned firms had come up, including several mills set up by the Singhanian family, who had themselves migrated from Farrukhabad. The year 1919 saw the first general strike, after which the powerful labour body, Kanpur Mazdoor Sabha, emerged, red hammer-and-sickle flags dotted "Lal Kanpur". After independence, several early elections were won by the communist party.

### [Indian Institute of Technology Kanpur:](#)

It was the industrial image of Kanpur that resulted in an IIT being set up here in 1959. Unfortunately, a variety of socio-political factors contributed to the decline of factories and it is true that we have not recovered since then. The new academic institution was temporary housed in the canteen building on the [HBTI](#) campus (located on the campus of the Agricultural University, dating to 1905).

On 13<sup>th</sup> July 1959, the state government assigned three villages for the new IIT-Purwa Nankari, Barasirohi and Nara-mau Bangar. The villagers were shifted to nearby areas and many of these families today live in Devisahay Nagar. The first faculty members, including a group of US academics under the Kanpur Indo-American Program (KIAP), arrived on campus to find standing crops, temples, several ponds and wells under large banyan trees. A row of mango trees lines an ancient road that used to cut across the present academic area.

This very place where we sit reading this information brochure may have heard the footsteps of Vedic sages and the clash of Pathan swords, and seen the bodies of many a Sepoy hanging from the trees nearby. If you would like to know more about this history, a campus group, Bumpy Trails, Bicyclists, organizes Kanpur history rides around January 26 and other dates.

### Modern-day Kanpur

Kanpur, as a city, is at a crossroad in its history and has retained an old-world charm about it. Rooted in traditional moorings it is trying to keep up with the needs of urban India. The older parts of the city are generally not well maintained; yet there are some wonderful treasures that can be found in some of the older streets. The leather stores on Meston road, the Lucknow Chikan embroidered cloth on Shivala road, the can furniture stores of Ashok Nagar, are some such places. The city is full of tempos, auto-rickshaws and cycle-rickshaws, and still has many expensive car showrooms. Despite its run-down looks there are some very good high-end restaurants, but there are also some excellent local eateries and smaller restaurants.

### Places to shop

There are a few modern malls that have many of the well-known stores such as Big Bazaar and Pantaloons. Some of the popular malls are Rave 3, Rave Moti and the Z-square mall. The Z-square mall in particular is very large with many stores; you can literally spend a full weekend here. For the more traditional and local markets, there are Naveen Market, Shivala Market, P-Road and Gumti. There are also many good stores in Arya nagar and clothes stores in Swaroop Nagar. There are speciality locations for some items- Meston Road for leather goods, Shivala for Lucknow Chikan embroidery cloth and embroiders, Vijay Nagar and 80ft road for electronic goods and Ashok Nagar for furniture, Birhana Road for jewellery and the Khaadi Handloom store in Rawatpur.

## Eateries

All the malls have many restaurants and food courts. We list below some of the other eateries in Kanpur. [Mr. Brown](#) bakery has two outlets in Kanpur and services excellent breads, cakes, biscuits, and sandwiches. The Tandoori Nights restaurant on the top floor of the [Landmark Hotel](#) has good kababs and biryanis. [Pundit's restaurant](#) has a few branches and serves traditional Rajasthani food. Some of the other middle range restaurants include [Little Chef](#), Mehfil, [Anaichas](#), and Chung-Fa. Shopping malls include excellent restaurants and provide for delightful weekend pleasure. For those with a sweet tooth or a taste for local eats, try [Agra sweets](#), Tiwari sweets, Ghosh Mishtan Bhandar, [Thaggu ke laddu](#) and Mithas.

## Traditional joints:

To enjoy Kanpur to its fullest, we recommend immersing yourself in some of the local traditional flavours:

1. Watermelons and musk melons: The heat of May is the time for watermelons and musk-melons in Kanpur. Tractors and truck carrying these fruits are everywhere. For the more ambitious it is strongly recommended to go to the Ganga river bank in Bitthoor or elsewhere and eat these fruits from where they are grown.
2. Mangoes: India is the mango capital of the world and Uttar Pradesh is the mango capital of North India. The mango season starts later than in other parts of India but goes well into August. The major local varieties including dussehri, langada, chausa and safeda are unique in their texture and flavour. The campus has numerous mango trees and a mango orchard which sells mangoes once a year, in summer.
3. Sweets and sweet dishes: Gajak, Petha, Jalebi and Imarti, Gajak is sesame sweet that is eaten during winter time. Petha is a traditional halwa made of white pumpkin. Perhaps not so good for the heart but jalebi is a heart-warming breakfast food in Uttar Pradesh!
4. Snacks/ Chaat/: In Uttar Pradesh, potato is ubiquitous. It pervades all foods, from snacks such as samosas and kachoris to main and side courses. Street food such as Batasas, aloo-tikki chaat, and pani poori are generally to be found all over Kanpur.
5. Other local fruits: Singhada (water chestnut) is a delicious fruit that is available for a few weeks in October. The Ber, Jamun, Shehtooj (mulberry) and Guava trees on campus are a real treat for the fruit lovers.

## Facilities available on IIT campus

Faculty Club: For a nominal fee, faculty can become a member of *Faculty Club*. Currently, this club is located in house number 605. The Club has a fully equipped gym, a TV room and music system, library, and an outdoor badminton court. The indoor game facilities include table tennis, carom board and chess. The club regularly organizes various events and hosts dinners during festivals. The faculty club also organizes regular dance, music, drums and painting classes for children as well as adults.

Spouse Employment cell in the DoFA office helps find suitable positions for spouses both within and outside the campus. Those who are interested can approach the DoFA office.

IIT Kanpur has excellent sports and fitness facilities. The Institute employs thirteen coaches for sports and a few instructors for gymnasium, aerobics, yoga, taekwondo and skating. The Institute has an Olympic size 25m × 50m swimming pool. There are two gymnasiums, one in the old sports complex and the other in the new sports complex. The gym in the new sports complex is air-conditioned. Both the gyms are equipped with cardio and strength equipment.

**Badminton courts:** The Institute has five wooden floored indoor badminton courts; two in the old sports complex and three in the new sports complex. There are four wooden floored, glass panelled squash courts. Two are in the old sports complex and the other two in the new sports complex.

**Lawn tennis courts:** The Institute has five synthetic tennis courts equipped with flood-lights. There is also a tennis practice wall with flood-lights. A bowling machine is a recent addition in the courts.

**Table tennis hall:** The table tennis hall is situated in the new sports complex.

**Basket ball courts:** There are two synthetic basket ball courts situated in the main sports stadium of the Institute.

**Cricket grounds:** The Institute has two cricket grounds with turf pitches. Both the grounds have practice pitches covered with cage nets.

**Football and hockey fields:** The institute has well-maintained football and hockey fields. The fields are equipped with floodlights that make play possible in the dark.

**Athletics:** The institute has well-maintained 8-lane 400 m tracks in the main sports stadium.

**Weight-lifting hall:** There is a well-equipped weight lifting hall in the Institute.

**Volleyball courts:** The Institute maintains four volleyball clay courts and one sand court.

**Aerobics and Yoga hall:** This hall is situated in the new sports complex. It is equipped with necessary aerobic gadgets.

**Pool room:** The pool room is in the new sport complex. The room has five good quality pool tables.

Artificial rock climbing wall: The Institute has installed an artificial rock-climbing wall.

Skating rink: There is an excellent skating rink, properly covered, designed to be used for both hockey skating and skating alone.

Magazines: A number of magazines are published from the campus, for example, Directions, Grape-Vine, Eyes, Vox-Populi, Antas (Hindi literary magazine), Sajag (news letter in Hindi), Avant Grade (monthly MGA e-newsletter), Eyes (campus magazine).

Hindi Cell: A vibrant Hindi Cell is active in creating awareness of Hindi among the institute employees. You will also find regional language groups sprinkled across the campus.

Women Cell: A Women's Cell has been constituted by the Institute to address issues pertaining to grievance, complaint of women at IIT Kanpur as per Supreme Court guidelines.

Transport and Conveyance: There are buses available to and from the campus that run on a schedule. There are several private taxi operators for the benefit the campus community who charge reasonable rates for their services.

Visitor's Hostel: Faculty can book the Visitors' Hostel for guests. The Visitors' Hostel provides boarding and lodging facilities and also has some allied facilities.

Shopping Centre: IIT campus has shops and utility centres that would take care of most of your daily needs. These not only include grocery and bookstores, but also three banks (SBI and UBI with facilities including locker-facility; ICICI), various cafeterias and eating places, as well as a post-office and a railway ticket counter.

Schools on the campus: The campus also hosts one primary school (campus school), one Kendriya Vidyalaya and a pre-primary school (Kislaya). A day care centre called Snehan helps with children in the pre-school age group.

For more information regarding many other aspects of campus life, you have to bank on your neighbours, colleagues and friends!

## Appendix on frequently used acronyms

Get acquainted with various acronyms that you may encounter frequently:

**DUGC:** [Department Undergraduate Committee] A department-level committee, it comprises faculty members and a student representative, which advises UG students on academic matters. It also acts as an interface between SUGC and the department.

**DPGC:** [Department Postgraduate Committee] A department level committee, it comprises faculty members and a student representative, which advises PG (MT, MS and PhD) students on academic matters. It also acts as an interface between SPGC and the department.

**SUGC:** Senate Undergraduate Committee

A standing committee of Academic Senate, comprising representative faculty members from various departments (DUGC conveners) and student representatives, to consider matters related to undergraduate students and programs. Functions of the SUGC consist primarily of framing policy, coordination across departments, and review, whose recommendations are examined by the senate.

**SPGC:** Senate Postgraduate Committee

A standing committee of Academic Senate, comprising representative faculty members from various departments (DPGC Conveners) and student representatives, to consider matters related to postgraduate students and programs. Functions of the SPGC consist primarily of framing policy, coordination across departments, and review, whose recommendations are examined by the senate.

**OARS:** Online Academic Registration System

A web-resource, where students can pre-register and register for their courses. The website is also used by faculty members to accept or reject students in their respective courses, view registration statistics, provide course notes, and keep an eye on the exam schedule.

**DoFA:** Dean of Faculty Affairs

The office of the DoFA is responsible for recruitment and promotion of the faculty apart from maintaining their official records. A group of scientific and design staff, such as research/computers engineers, scientific officers, and the Librarian are also included. The office also enables appointment of visiting faculty, emeritus faculty and postdoctoral fellows in various departments. DoFA is normally assisted by an Associate Dean.

**DFAC:** Departmental Faculty Affairs Committee

A department level committee that takes important decisions related to faculty affairs.

**IFAC:** Institute Faculty Affairs Committee

An Institute level committee that takes important decisions related to faculty affairs, including selection process.

HAC: House Allotment Committee [a committee which oversees the allotment of houses based on the guidelines approved by the Institute].

DoRD: Dean of Research and Development

The office maintains records of project grants received from funding agencies. It helps in placing purchase orders, appointing staff, and preparation of certificates required for submission to the funding organizations. Your initiation grant proposal will be processed by the R&D office. DoRD is assisted by two Associate Deans, one for industrial consultancy and the other for innovation and incubation.

DoAA: Dean of Academic Affairs

The office of DoAA is responsible for the implementation of the decisions taken on academic matters by the Senate, SUGC and SPGC. It is responsible for holding student records during their stay here as well as later. Registration of students in courses is a primary activity as is the annual convocation. DoAA is normally assisted by two Associate Deans.

SPI: Semester Performance Index

It is an indicator of the academic performance of a student in all the courses he/ she has registered during a given semester.

CPI: Cumulative Performance Index

This index is used as an indicator of the overall academic performance in all the courses taken by the student, including all semesters.

CCC: Core Curriculum Committee

CCC is a standing sub-committee of SUGC whose primary task is to oversee the conduct of the core curriculum and allocate courses judiciously across departments.

APEC: Academic Performance Evaluation Committee

APEC evaluates the academic performance of the undergraduate students to make recommendations regarding (i) continuation of their studies and (ii) action to be taken in the case of grade-wise deficient students.

DoSA: Dean of Student Affairs

The office of the DoSA is responsible for maintaining discipline and harmony among the students of the institute. Of importance are the extracurricular activities of students, inter-IIT events, and cultural festivals. In addition, the office of DoSA enables fiscal discipline in the running of the hostels and the messes. Student discipline is conducted through a committee called SSAC that reports to the senate. DoSA is normally assisted by two Associate Deans.

COW: Council of Wardens

This is the committee of all the wardens from all the hostels.

HEC: Hall Executive Committee

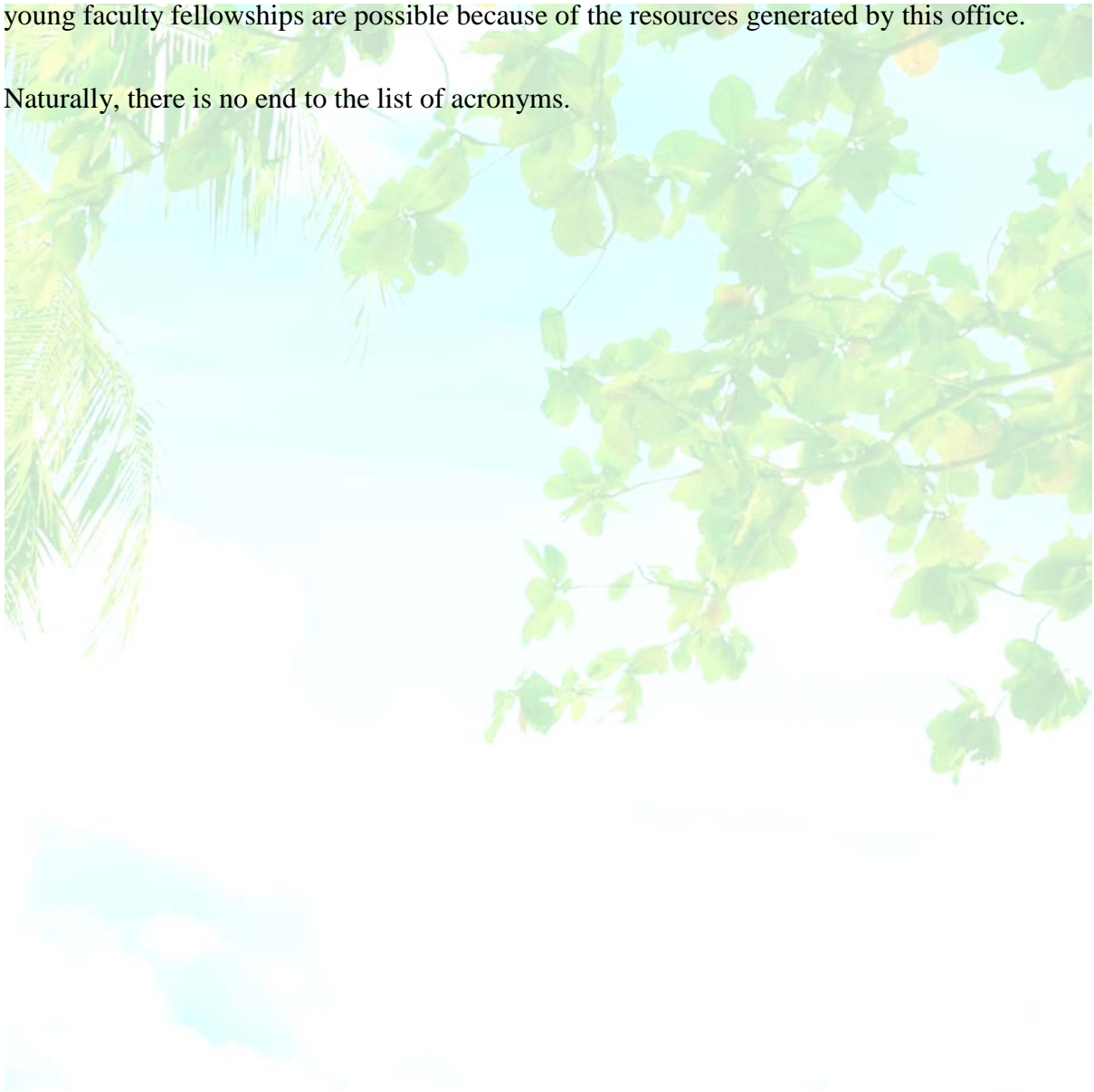


Each hall has an executive committee comprising of the wardens and elected student representatives which looks after day to day activities of the hall.

**DORA: Dean of Resources and Alumni**

The office of Dean, Resources and Alumni is responsible for Alumni Affairs, International Relations and Resource Mobilization. It maintains contact with alumni, solicits donations and creates new avenues for the students in terms of awards and travel grants. Chair positions and young faculty fellowships are possible because of the resources generated by this office.

Naturally, there is no end to the list of acronyms.



## About the Institute

Indian Institute of Technology Kanpur, the fourth oldest among the IITs is famous for pioneering science based engineering education in the country, thanks to the early association of nine top US universities during 1962-72. Besides making significant contributions in establishing high standards in higher education, it is known for cutting edge research in science, engineering and humanities. In its fifty-six years of existence IIT Kanpur has produced over 30000 illustrious alumni many of whom are pioneers in research, entrepreneurship and technology domain. In a long list of exceptional individuals, we have many whose contribution towards mankind have brought in many accolades to themselves and to the institute. IIT Kanpur nurtures freedom of thought, free flow of ideas and an academic atmosphere that excites the mind, fosters creativity and drives innovation among its students and faculty.

IIT Kanpur houses 15 core departments, 6 interdisciplinary programs and over 12 centers spanning various fields of Science, Engineering, Humanities and Social Sciences, Economics and Management which offer variety of academic programs, e.g. BTech, BTech-MTech dual degree, B.S., M.S., MTech, M.Des., MBA and PhD. In order to meet the evolving academic needs of students and the society at large, the core course curricula are revised every ten years. Its flexibility allows students to take courses as per their interest and graduate with multiple majors/minors in different departments. Beside regular ones, large number of advanced level courses are offered which allow students to explore the depth and rigor of a specific field. In order to make higher education universally available, the institute participates extensively in developing online web based and video-recorded courses under the national education missions like NPTEL, GIAN and others. It has initiated academic exchange/collaboration with seventy Universities throughout the globe. IIT Kanpur boasts also of its highly versatile online course management portal Brihaspati, several state of the art e-classrooms and large number of online journals accessible via high speed internet throughout its campus.

IIT Kanpur has several firsts to its credit. It holds the distinction of establishing the subject domains of computer and materials science in the country. It is also the first academic institution in the country to install the first supercomputer. The seminal discovery of an algorithm for prime number testing is an example of its commitment towards excellence. IIT Kanpur houses a modern flight laboratory with a functional runway and the National Wind Tunnel Facility which has played a critical role in several national missions. The newly established National Center for Flexible Electronics is an experiment in which academia, industry and research organizations will work together to create new ideas, develop them to products and finally commercialize the products for the greater benefit to the society. To promote interdisciplinary research and cross-fertilization of ideas, IIT Kanpur has taken several initiatives, e.g. CARE scheme, REACH symposium, and adjunct professorship. Over the years, IIT Kanpur has successfully carried out large number of projects sponsored by government organizations, public and private industries and have directly contributed to them

by transferring technologies. To promote the culture of entrepreneurship among students and faculty, the institute has established an Innovation & Incubation Centre which mentors newly launched companies in technical, administrative and business matters and helps them establish a competitive edge over their competitors. Since its inception in the year 2000 it has mentored over fifty companies with 26 graduations to its credit. It has filed 264 patents and commercialized 60 patents. The bio-incubation center is a recent addition to this effort, which will particularly promote bio-technological and bio-pharmaceutical start-ups.

Our Institute is home to 6500 students who live inside the campus in 12 hostels equipped with most modern amenities, like state of the art mess, spacious play grounds, library, student activity center, health and yoga center. The nerve center of all student activities is the student gymkhana which organizes large number of sport and cultural events throughout the year. These events promote spirit of competition, opportunity for self-exploration and excellence in one's hobbies, all of which facilitate development of overall personality of students. Students are exposed to learning through research from undergraduate level itself through variety of structured programs, which include advanced level elective courses, semester and year-long research projects embedded in our UG/PG course curricula and a number of student exchange programs. Students participate in research also through number of Science and Technology clubs. The annual international science-technology and entrepreneurial festival TECHKRITI organized by the S&T club offers a platform for students from large number of technical and engineering institutes in the country and abroad to participate in variety of science/technology related competitions, share the excitement of their new discoveries among their peers, display models and prototypes for solving problems of the society and get a first-hand experience of developing entrepreneurship.

The strongest pillar of IIT Kanpur is its 400 odd highly qualified faculty members whose commitment to teaching and research knows no bound. They are top performers in their own field, whose contribution towards science and technology is regularly acknowledged in various national and international institutions and societies. Our faculty have among themselves recipients of Padma Shri, Foreign Associateship of National Academy of Science (USA), the TWAS prize, the Fulkerson Prize, the Gödel Prize, the Infosys Prize, the Shanti Swarup Bhatnagar Award, Humboldt Research Fellowship and so on. Despite many achievements, they remain humble yet hard working, confident yet non-complacent and simple yet non-comprising on excellence. With a vibrant academic program, highly inspiring faculty and exceptionally competitive students with a global outlook, IIT Kanpur has the ingredients for becoming the role model as an educational institute for the twenty first century.

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