

SOPHOMORE BOOKLET



DISCLAIMER

The information written in the booklet is only meant to be a guideline to the sophomore students. It may happen that the information or rules mentioned in the booklet may face an amendment or change at any time. Please confirm the rules/details from competent authorities before making any decisions.



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A WORD FROM GSAA

Hello Dear Sophomores.

It is so pleasant to see you enter into your second year at IIT Bombay. Hope you had an amazing and a joyful ride through your first year at IITB and a wonderful summer break.

Your first year opened you to new arenas, a new culture and a new environment, things to which you would have become much habitual by now. Undoubtedly you would have realized the vast ocean of opportunities available to you, may it be curricular, co-curricular or extracurricular. And how immensely important it is to balance your academics with your extra currics here at IIT Bombay.

Now, coming into your second year, you will experience a big difference especially in terms of your academics. Your first year curriculum was very rigid, with you completing a defined set of courses. As a sophomore, you will be privileged with much more freedom. Not only do you have the flexibility of choosing your own courses from a vast pool of running courses, you can now delve into opportunities and facilities IITB is much renowned for. The foreign exchange program of the institute (perhaps the best in the country), URA, internship opportunities etc will help you broaden your horizons both academically and intellectually.

This booklet has been designed specifically to brief you of these topics and much more, so that you can have a perspective of what all is available and choose to orient yourselves accordingly. Please read through to learn more and make an informed decision on how you want to direct yourselves. Do remember that unlike your first year there are no ISMP mentors to guide you. So the onus to keeping yourselves well aware rests solely on you.

Lastly, enjoy the sophie year. It's going to be much different than your first year. Your new hostel life awaits you.

Many of you must have already entered the new, and if I may say, the glamorous world of PORs. However, do not lose track of your academics for the semester is going to become challenging (and full of quizzes :P). Those who had a satisfactory first year academically, keep up the good effort. Those who did not, believe me, it is not late to start.

Wish you all the very best!

Suyash Verma

General Secretary Academic Affairs



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Completing the first year of studies where students study all the common courses, they move into a world of specialised learning where the semester curriculum is inclined towards department specific courses. While this transition occurs, a plethora of opportunities opens up for the now sophomore students. To name a few, Semester Exchange, Internship and Undergraduate research but first let's take a look at the Registrations, which the sophomores face for the first time.

REGISTRATION

IIT Bombay follows a specialized **credit based semester system**, therefore registration at the beginning of each semester (lookout for dates in the Academic Calendar) is mandatory for you till you complete your programme. Without registration, any academic activity (course/seminar/project etc.) that you undergo will not be counted towards the requirements of your degree. The **total credits** for the B.Tech. programme for example varies between **252-264** depending on the discipline. This approximately converts itself into about four theory courses and one or two laboratory courses or other activities like seminar, project, etc., every semester. Every student in that discipline undergoes this programme; this minimum content may not have much flexibility.

SEMESTER-WISE REGISTRATION

You can register for the courses you intend to take during a given semester on the basis of the programme for your discipline as given in your curriculum and as per the advice given by your **Faculty Advisor**. You can check a particular semester's curriculum on **ASC in Academic --> All about courses --> Bulletin Report section**.

From third semester onwards, registration is dependent on the academic standing of the student.

ACADEMIC STANDING

Depending on the **overall academic performance** of a student till date, especially in the two preceding registered regular semesters (autumn and spring), academic standing of the student is decided. It's categorized as follows:

CATEGORY	ELIGIBILITY	IMPLICATION
CATEGORY 1	No backlog courses, cpi>8.0	Can take two additional courses per semester, for additional learning
CATEGORY 2	Registered for at least 18 credits in each of the two preceding regular semesters and not failed in any course in these two semesters	Can take one additional course per semester, for additional learning (Dual Degree students of category 2 cannot avail of this, refer to 'Normal Load For Dual Degree Students')
CATEGORY 3	Not failed in more than one course in the two preceding regular registered semesters, subject to having earned at least 18 credits in each of the semesters.	Can take one additional course per semester, preferably for clearing backlogs (Dual Degree students of category 3 cannot avail of this, refer to 'Normal Load For Dual Degree Students')
CATEGORY 4	Failed in more than one course in the two preceding regular registered semesters, but has earned at least 18 credits in each of the semesters	Can only register for reduced load
CATEGORY 5	Not earned at least 18 credits in either one of the previous two regular registered semesters	Can only register for reduced load

Only students of standing of Category I, II or III are permitted to register for Normal load. Category IV and Category V students should register for lower credits.

NORMAL LOAD | OVER LOAD

There is a credit limit prescribed for each academic standing, called the **normal load**. These credit limits are as following:

■ **Category I: 52** ■ **Category II: 44** ■ **Category III: 44** ■ **Category IV: 36** ■ **Category V: 24**

Any overload over and above this will have to be approved by the **Faculty Advisor**. Note: Every student however is required to register for a minimum of 18 credits in any semester.

Permissible Load for B. Tech / 5 year Integrated M. Sc / 4 year B.S Students

Type of Load	Semester		
	1	2	3-10
Reduced Load (Category 5)	33 or 34	33 or 34, less one theory course	Xj less one theory course
Prescribed Credits (Category 1,2,3,4,5)	33 or 34	33 or 34	Xj
Normal Load (Category 1,2,3,4,5)	33 or 34	33 or 34 41 or 42 (Category 3 and 4, for clearing Backlogs)	Xj + C
Overload (Category 1)	33 or 34	33 or 34	Xj + 2C

Permissible Load for Dual Degree (5 year B. Tech + M. Tech) Students

Type of Load	Semester		
	1	2	3-10
Prescribed Credits (Category 1,2,3,4,5)	33 or 34	33 or 34	Yj less one theory course
Normal Load (Category 1,2,3,4,5)	33 or 34	33 or 34 41 or 42 (Category 3 and 4, for clearing Backlogs)	Yj (Category 2 and 3 allowed to reg for one backlog course)
Overload (Category 1)	33 or 34	33 or 34	Yj + C

To clarify a bit more....

NORMAL LOAD FOR B.TECH AND INTEGRATED MSC.

■ In the third semester and later, normal load for a B.Tech. or an Integrated M.Sc. student is defined as the prescribed load for the minimum requirement of the degree for that semester and credits for an additional course (**6-8 credits**), subject to total credit **not exceeding 42 credits (44 credits in case the additional course is of 8 credits), and theory courses not exceeding 6.**

■ For example, the prescribed credits in semester 3 for a particular discipline may be 33. The normal load for that discipline in the semester is therefore 39-41. Adding (6 or 8 credits). The normal loads for other semesters are to be computed along similar lines. **Students with academic standing of Category I, II or III are permitted to take normal load.**

■ Those with excellent academic standing (**Category I**) can, in addition, overload themselves to the extent of one theory course equivalent (**6 or 8 credits**). That is, they can register for **two courses in addition** to the prescribed load, subject to total credit not exceeding **48 credits (50 credits in case the additional courses are of 8 credits), and theory courses not exceeding 6 in number.)**

■ **Category III** students should use the additional course permitted to **clear the backlog courses** if available in the semester. If backlog courses are not available, they can also use the opportunity for **additional learning** in that semester.

Students belonging to **Category IV and V** can only register for **reduced load.**

NORMAL LOAD FOR DUAL DEGREE

■ **Dual Degree students** are typically prescribed one theory course more than the B.Tech. students every semester towards the **mandatory honors** and dual degree requirements. Therefore the normal load for these students will be the prescribed load itself.

■ So, **Category II and III students from the Dual Degree cannot register for courses towards additional learning.**

■ Students belonging to **Category IV and V** can only register for **reduced loads.**

- **Category I** students can take one course extra as an overload towards **additional learning** subject to total credit **not exceeding 48 credits (50 credits in case the additional course is of 8 credits), and theory courses not exceeding 6.**

REDUCED LOAD FOR ACADEMIC STANDING IV AND V STUDENTS

- **B.Tech. and Int.M.Sc. students** belonging to **Academic Standing IV** status can only register for a total of credits equivalent to the prescribed credits for that semester in her/his discipline. (This would normally mean four theory courses and one or two labs. etc.)
- Students belonging to Academic **Standing V status** can only register for those many credits which are at least one theory course equivalent less than the credits prescribed for that semester in her/his discipline, subject to plus **a minimum of 18 credits.** (This normally would mean three theory courses and one or two labs. etc.)
- Dual degree students of **Category IV and Category V** are advised to register for one and two theory courses respectively, less than their prescribed load and as advised by their faculty advisor.
- Students have to register for the backlog courses before registering for other courses, if those courses are available in that semester. However, Faculty Advisor can recommend exceptions to avoid cascading effects due to prerequisites for other courses.

NOTE: *All students in Category V should submit a revised schedule along with the course registration form, in consultation with the Faculty Advisor, for the succeeding semesters stating how the backlog courses will be cleared.*



ONLINE REGISTRATION PROCEDURE

- On-line registration process involves filling up of an online **Course Registration Form (CRF) (asc.iitb.ac.in)** stating the courses and project / seminar etc, that you propose to complete during that semester as per the prescribed curriculum.
- This should be done in consultation with the **Faculty Advisor**, who finally approves the registration.
- Unless this procedure is completed, your registration will be considered invalid.
- All students without backlogs will be able to do online registration. **Students having outstanding dues to the institute or a hostel shall not be permitted to register.**

MANUAL REGISTRATION PROCEDURE

- Students' having **backlog course(s)** is/are required to do **manual registration** by filling up the **Course Registration Form (CRF) available in the Academic Office.**
- The student should duly complete the CRF, stating the courses and project / seminar etc. that he/she proposes to complete during that semester as per the prescribed curriculum, in consultation with the Faculty Advisor, get it approved by him/her and then submit the same to the Academic Office within the stipulated date for registration.
- **Note:** Students belonging to **Category V** and those with **four or more backlogs** should additionally submit, along with the course registration form, a revised schedule for the succeeding semesters stating how the backlog courses will be cleared, in consultation with the Faculty Advisor.
- **Late Registration:** Only for valid reasons, late registration may be permitted till the date specified in the Academic Calendar, on payment of a late registration fee.

COURSE ADJUSTMENT

A student has the freedom of **deletion/addition** of one more course (after discussing and taking permission from the Fac-Ad) provided the total credits do not exceed the overload rule or fall below **18 credits** by such adjustments. **The last date for doing is about 2 weeks after the commencement of the semester.**

DROPPING COURSES

If a student finds his/her academic load too heavy, even after the date for course adjustment has passed, s/he may **drop one or two courses** out of the registered ones provided the minimum credits hold, after taking permission from the Fac-Ad. **The last date for doing so is 10 days after the end of mid-semester examination.**

REGISTRATION FOR ADDITIONAL COURSES

TYPE	MEANING	CPI
Minors	30 credits worth of additional learning in a discipline other than your own major.	Separate minor CPI
Honours Electives	Total 24 credits (for B. Tech) and 30 credits (for Dual Degree) worth of additional learning in your own discipline for an honours degree.	Separate honours CPI
Institute Electives	Extra course taken in any department other than your own given you fulfill the prerequisites.	Count towards major CPI
HSS Electives	HS3xx courses, Humanities and Social Sciences department.	Count towards your major CPI
Department Electives	Additional courses in your own department.	Count towards your major CPI
Additional Learning Courses (ALCs)	Any extra course, in any department, by your choice, taken up for extra learning.	Don't count towards your CPI
Audit Courses	Wanting just an exposure to a course - without obtaining a good grade - maximum of 2 audit courses in entire period of study.	Don't count towards your CPI
Sit through	Sitting through a course only for exposure without registering for it	Don't count towards your CPI

MINORS

Completing 30 credits in the area of your interest in another branch.

- An online interface is made available during preregistrations through external **ASC** (www.iitb.ac.in/asc) a few days before the commencement of the Academic Year to register for Minor courses.
- The minor courses will be allotted based on **CPI (Or any other criteria prescribed by the Faculty Incharge, Prerequisites etc).**
- You have to fill preferences at the time of pre-registrations and the allotment for minor courses is similar to choice-filling in JEE.
- The tentative date for pre-registration this year is **10th July**.

HONORS

Completing 24 credits in the area of your interest in your own branch.

- **There is no specific registration for Honors.**
- You can register for the Honor courses in '**Additional Courses/ Extra Courses**' section during core registrations (which will take place on **13th and 14th July**).
- One accumulates the required credits during the course of the programme, and the additional credential is awarded if the criteria set for them are met when the student graduates.

INSTITUTE ELECTIVES

Compulsory credits where the course is of your choice (there are some exceptions, however) from some other department other than your own.

- Registration is done along with the **Core registration** at the start of the semester on the online interface. However, for some popular courses (having limited seats) registration is done during pre-registration itself and course is allocated on **CPI basis**.
- Students overloading their Semester are required to manually submit the **Course Registration Form (CRF)** approved by the **Faculty Advisor**, to the Academic Office

Note: 1XX courses, core dept. courses and many of the **SOM, ENT and IDC dept. courses cannot be taken as institute electives**. So, it's always better to ask the faculty in charge if the course you wish to register can be tagged as an institute elective or not.

HUMANITIES ELECTIVES

HSS Electives: Compulsory course to be done from HSS department out of 4 available options - mostly in the 5th semester.

HSS Institute Electives: Institute Electives from the HSS Department

- **Pre-registration** needs to be done for the courses offered by **HSS Department** as Humanities elective or as Institute Electives (Humanities Institute Elective) on the provided interface.

- Courses are allotted on the **CPI basis (Or any other criteria prescribed by the Faculty Incharge).**

- Once allotted (after pre registration), the HSS course will come on your registration interface on **ASC**, and you need to register it the way you register for core courses

Note: Humanities Elective and Humanities Institute Elective are not same.

DEPARTMENT ELECTIVES

Compulsory credits through a course of your choice from a pool of courses prescribed by your department

- Registration is done along with the **Core Registration.**

- In case of any discrepancy faculty advisor's approval is to be submitted to the academic office.

ADDITIONAL LEARNING COURSES (ALC)

Your course, your choice. Credits not counted towards degree completion. However, tagging involves ALC's as well - so you might want to take a look at the tagging rules.

- Registration done along with **core registrations.**

- Subject to approval by the Faculty in charge of the course and the Faculty advisor of the student.

AUDIT COURSES

Wanting just an exposure to a course, without the rigors of obtaining a good grade.

- Registrations are done along with core registrations.

- Restricted to a maximum of **two courses** in the entire period of the programme.

- Only students in **Category I and II with CPI > 6.0** are permitted to **'Audit'** a course during a regular semesters and summer term.
- Course will be mentioned in the transcript as **'Audit'**

SIT THROUGH

If you are really interested in a particular course but are unable to register for the same due to some constraints (generally happens with popular minor courses). But you are still willing to sit in that course just for knowledge, without any privilege for credits or mention in transcript, then you can ask for the faculty in charge's permission to sit through that course. **There are no registrations for Sit-Through.**

WAITLIST

Waitlist for courses with limited seats:

Academic office maintains an **online WAITLIST** for courses which have an enrolment cap. (The maximum enrolment limit for courses may be viewed at **ASC > Academic > All about Courses > Courses with Upper Cap post Login**)

- Students registering for a course with registration limit are enrolled for the specific course on **CPI basis** through **pre-registration and First Come First Served (FCFS) basis** during normal registrations or wait listing. Therefore students registering early, stand a higher chance to get confirmed registration for popular courses.
- If a course enrolment has reached its maximum limit, students are allowed to register conditionally by maintaining a wait list. The **'available/Wait-list'** status of courses can be seen at the **registration page**.
- If a student having confirmed registration **DROPS OUT** of a course, the vacated seat is offered to the first waitlisted student.
- An email (**on GPO**) is sent to the concerned student about the availability of the seat. This seat is blocked for the specific student for a period of **12 hours**.
- Wait listed students are **STRONGLY ADVISED** to monitor their waitlist status, and opt out of the wait list and register for alternate courses, **12-24 hours** prior to the last course **ADD/DROP** date.

Note: SUPER-NUMERIC (more than the specified number of seats) - seats are purely upon the discretion of the **Course-instructor**. Such seats cannot be 'applied for' online. Students have to approach the course-instructor, obtain his approval on paper, and apply for such registrations through the manual route by submitting the permission letter obtained from the course-instructor at the academic office.

FAQs

Q. If I get an FR Grade in a minor course do I need to repeat the course? And will it reflect in my final transcript?

A. No, you do not need to repeat the course. However an 'FR' grade will reflect in the course will reflect under the additional courses done.

Q. What is the difference between an ALC, Audit course, and sitting through a course?

A. ALCs do not count towards your CPI but are involved in tagging - Tag it later as an elective and the grade you get then counts in your cpi. When you audit a course, you do it without obtaining a grade - you get 'AU' - which does not carry grade points. Formal registration is required for both these, and they appear on your transcript, while for sitting through a course - you don't need to register for it, nor does it appear on your transcript.

Q. If one gets an FR in Elective HS *xxx*. Does he need to repeat the same choice or can he do Elective HS*yyy* in its place?

A. He can take *yyy* as his HSS elective by changing the tag of HS*xxx* to additional learning and registering for *yyy* in the next semester as HSS-Elective.

Q. What about the credits when one does some honour courses but they're not enough for an honours degree?

A. If one has done some of the honour courses but not enough to acquire an honours degree, then those courses would be counted in Additional learning CPI. (for DDs, compulsory honours courses will affect their Core CPI)

Q. What if I take up a course of any other random subject but I don't want to get a minor will that course show up anywhere while passing out?

A. The grade that you obtained in the course will show up in the transcript. All the courses taken up as a minor are converted to Additional Learning unless you have completed 30 prescribed credits of minor in a particular department.

Q. Is waitlist based on who pre-registers first?

A. No, it is entirely based on who registers first. It has nothing to do with pre-registration.

SOME USEFUL NOTES

- If you have successfully done the pre registration of a course (**Minors/ HSS Electives**), then at the time of registration the allotted pre registered course comes under the heading **“Pre Registered Courses”** on your asc interface, and you need not register for the course again under any other heading say Institute elective, Non Credit Course, Additional course etc.
- **False backlogs** - If you are being shown a false backlog, then visit Academic Office and get it resolved (fastest method).
- **Slot clash** - Please ask your **DGSec** to get it changed through the **Time Table Coordinator**.
- **Missed Pre-registration** - Register for the course online and get the override form signed by the course instructor, and submit it to Academic Office.
- **Course not listed** - If you get a message on the interface saying that the course is not running this semester even though it is, please check the division (**'M','S1'**, etc.) in the list of running courses and enter the correct division on the interface while registering for it.
- Entering the division as **'M'** will not change your tag to minor (All about courses Running Courses)
e.g. CE 310 - M, MM 474 - M, CS 101 - D1/D2/D3/D4, etc.
- **Pre-requisites pains** - If there are errors, please send a mail to asc.help@iitb.ac.in with a screenshot, if the grade for the prerequisite course is not out or if you want to take a course without clearing the pre-requisite, please take permission from the course instructor on an application and submit it to Academic Office.



SEMESTER EXCHANGE

Student exchange, as the name suggests, is a program where in a student from the institute studies abroad at one of the institute's partner institutions. Semester long student exchanges to premier institutions abroad is one of the unique perks of IITB's strong and long lasting relations with foreign institutions of its kind.

Some benefits associated with this program are - international learning and understanding of different perspectives, language acquisition, analytical and problem solving skills, enhanced interest in global issues, self-development, improvement in soft skills, expanding your network, maturity and awareness and diversification of one's horizons.

You can go for a semester exchange for either 1 or 2 semesters, but care has to be taken to ensure proper course mapping and avoid clashes between the academic calendars of the two institutes.

- To know the detailed procedure of the application for Sem-Ex, visit:

http://www.ir.iitb.ac.in/?page_id=396

- IIT Bombay has MOUs with a number of institutes all around the globe. You can find a list of these institutes at :

http://www.ir.iitb.ac.in/?page_id=137

- You can find other helpful resources related to semester exchange here:

<https://tinyurl.com/IITBSemX>

If you need more information for the same, you can contact the **Institute Secretary for International Affairs (ISIR)** or **the Dean of International Relations**.



ROLE OF FACULTY ADVISOR

The Faculty Advisor has a very important role to play from second year onwards. While the role of Fac-Ad is limited to a few interactions and providing academic guidance to academically weaker students during the first year, the second year brings into picture a lot of scenarios where you need to have a proper consultation with your respective Fac-Ad regarding registration, course adjustment/dropping, additional courses, overloading and other academic opportunities available to you as a student (besides taking their official permission at various times).

The interaction with the Fac-Ad from your sophomore year onwards isn't just limited to registration-related matters but extends to many other areas such as career decisions, project choices, various institute activities and even social matters. The Fac-Ad is the go-to person for most of the queries that you might have during the remaining stay of your institute. He/she is also the person whom the parents/guardians of a student should contact for performance related queries.

Some key points about what the role of Fac-Ad entails-

- Advise students to overload/drop one or more courses/activities based on her/his academic performance as per the prescribed rules.
- Suggest modalities for course/credit requirements for the students recommended for exchange programme.
- Inform students that any academic activity (course/Lab/seminar/project/non credit requirement etc.) undergone without proper registration will not be counted towards the requirements of his/her degree.
- To ensure that students are not permitted to reregister for courses, which they have already passed.
- At the end of the first semester/year, the Faculty Advisor may even advise a reduced load programme for a poorly performing student. This reduced load programme may spread over several semesters subject to minimum load for the semester and completion of the degree programme within the prescribed maximum period. Such reduced load programme is to be prepared by the Faculty Advisor in consultation with the Student; her/his parent and recommend the same through the **DUGC** to the **UGAPEC** for consideration and approval before the commencement of the semester.

What are the new initiatives for me in store?

This section is meant to familiarize you, the sophomore, about the general initiatives from the Academic Council and the institute by large, some of which would be starting from this academic year, while others have been in place from some time, but lack of awareness has prevented them from becoming common knowledge amongst the people.

Sophomore TSCs

TSCs were life saving in the freshie year, weren't they? The SSS team has therefore planned to conduct more Sophomore TSCs from this year onwards for the popular second and third year courses so that you guys enjoy the benefits even in your sophomore year. What's special about these session is that they will not just be conducted by seniors who have excelled in the respective courses, but also by your own peers who have a good grip on the course. The past experience has taught us that these peer-sessions are quite effective since the course content is exactly similar and you can have better interaction with the TA. So, whenever you need a session for some course, contact the Academic Council and we'll get it arranged for you.

Interdisciplinary Dual Degree Program

Interdisciplinary dual degree essentially is a conversion of Bachelors student into a dual degree program with Bachelors in parent department and Master's in another department of the student's choice. This ensures that motivated students can pursue Master's in the field of their choice to further the prospects of utilizing that knowledge and degree for opportunities after moving out of IITB. Interdisciplinary dual degree allows the student to do a PG level courses and electives in the department of choice together with the DDP (Equivalent to Master's degree credits), and get a Master's degree in that department. At present, the negotiations are on between departments to finalise on the program.

Fast-Tracking of B.Tech

Fast tracking of degrees is the completion of B.Tech degree in 3.5 or in exceptional cases 3 years when a student has completed the required coursework (credit requirements for that particular degree) and wishes to utilize the last semester(s) in some other activities like internship, competitive exam prep, entrepreneurial ventures, etc. Then the student can get a provisional degree and leave the Institute earlier, although the final degree will be awarded at the formal Convocation itself.

The students, who complete their coursework in three-and-a-half-year, will be eligible to sit for the placements in December and start working immediately too once they are placed.

It is worth noting that the accumulation of credits for fast tracking of your degree starts only from the beginning of your sophomore year

Inter-IIT Semester Exchange

Inter IIT Semester exchange as the name suggests, is an initiative to bridge together IITs, the top institutes of the country through a semester exchange program. Similar to a regular semester exchange program, students will be able to study for a semester at their host IITs taking up regular courses and earning credits on the lines of the existing foreign semester exchange programs. Every IIT has its own centres of excellence. A student can now go and spend a semester or two at one of his or her preferred IITs. The credits earned during the stay will be exchanged. For more information you can go to :

<https://tinyurl.com/inter-iit-semex>



REVIEWS OF SOME MINORS

Deciding which minor to take is always a confusing task - students often find themselves in a dilemma as to whether they should go for the "popular" minors or something based on their interest. To help ease out the confusion, here're some reviews on some specific minors by the seniors who took them:

Mathematics Minor - Anish Kulkarni

The mathematics department offers the following five courses under a Minor tag: Real Analysis (RA) (odd sem), Basic Algebra (BA) (odd sem), General Topology (GT) (even sem), Complex Analysis (CA) (even sem) and Fourier Analysis (FA) (odd sem). Each course is an 8 credit course which means you can choose any 4 of these to complete your minor.

There are 3 hours of lectures + 1 hour of tutorial per week. There is a lot of material to cover, hence the tutorial may (read will) often get converted to a lecture. It is highly recommended that you attend lectures and catch up on missed lectures (especially true for GT). Concepts are often heavily based on previous concepts. In my experience, if you attend lectures and solve the tutorials you are almost guaranteed a good grade. I took RA in my third sem and GT in my fourth sem. RA has some overlap with the first year calculus course, but there are many new topics as well. You will define everything precisely and prove almost every result. This is in general true about math minor courses.

These courses will improve your reasoning skills, creative thinking and ability to think about abstract ideas. These skills are in general useful and fun to develop. Most math courses that you might have done were probably aimed at teaching math as a tool for other branches. In contrast, math minor introduces you to some fields in mathematics that are essential to a mathematician and is taught in way a mathematician would find it useful.

Statistics Minor - Anand Dhoot

One would think Statistics as a tool which would help them in data analysis - like, if you go to a finance company then given the data, you will learn how to make certain conclusions based on the data and stuff like that. But statistics minor is way different than that.

There are three 8 credit courses and one 6 credit course. Most of the 8 credit courses require 3 hours of lecture and one tutorial hour, except one, which has 1 hour of practicals. The minor is mathematics oriented, but not as abstract as the maths minor. There is quite a lot of overlap of these courses with CS core courses, and have wide applications in computer science and finance. They also help in internships and placements.

The CPI cut off for doing this minor is high because there are only 20 seats for this minor. But, the prof might easily allow you to take the course up if you show some interest. Also, the minor courses run only in alternate years, just like the maths minor.

CS Minor - *Kalpesh Krishna*

The Computer Science minor consists of a set of five 6-credit courses, four of which must be marked with an "M" in their course code. The fifth course could optionally be an RnD project (CS490), or an elective in the CSE department. The minor typically has courses running in both semesters.

I've personally attended three "M" courses, and I have a mixed opinion. What I felt after doing these courses was that though the course content is really good and important for most of the IIT students, but if you're expecting to gain as much stronghold on the topics as a CSE student just by doing the courses properly, then you might be disappointed. A lot of courses don't have the supporting labs or course projects that are there for the regular CSE students, which are really essential for understanding and applying what you've learnt from the course.

So overall, I find it kind of restrictive. While a CS minor boosts your chances for a future in a computer science field or to gain really good internships and placements, the courses are probably not being conducted in the best way possible. There is a lax attitude among students towards the minor courses, and many students lose interest in the subject quickly. If you are seriously interested in learning computer science, I'd recommend you to take the minor courses seriously, and spend time outside classroom exploring computers. Getting into projects, taking other CS electives are essential along with the minor course.

IDC Minor - *Shievani Upadhyay*

The general perception about IDC courses are that you can easily get a 9 or 10. That's true for only some courses. More often than not, you will have to religiously attend lectures and do assignments. Still, IDC courses are relatively easier to score in and hence a popular choice for Institute Electives.

Most IDC courses will not have a strict attendance policy. But attendance will be recorded and given a pretty high weightage in the final marks. So make sure you attend classes regularly.

As mentioned above, grading is relatively chill, but all assignments given will count.

Examination pattern varies from course to course. Most courses don't have quizzes or midsem examinations (some even endsem). Instead they have course assignments.

This gives you a very hands on experience in the subject and doesn't add up to another course in your midsem schedule. IDC courses cover a vast range of topics - for example: animation, film appreciation, product design, data visualization, etc. More often than not, you'll probably have no experience in these fields. So, ask seniors who have previously done courses in IDC.

As a piece of advice, please try and actually learn what is taught in the course. You might end up loving it. Being in IIT Bombay, we are really lucky to have the option to explore Design courses. Utilize this opportunity to learn something different. The IDC faculty is very approachable and will help you out if you just show some interest. They really love what they are teaching and will even let you do projects under them during the vacations.

Mechanical Engg. Minor - *Yashraj Gurumukhi*

It consists of six courses from the core mechanical courses itself. The basic courses include fluid dynamics, solid dynamics, thermodynamics, manufacturing processes 1, manufacturing processes 2, kinematics and dynamics of machines. These are pretty popular courses and cover the basics you need for mech and also these courses do not go much into details, they just provide an overview. It's a pretty interesting field and a mechanical minor makes a lot of sense if you are really interested in robotics as well.

Electrical Engg. Minor - *Rishabh Israni*

The elec minors I took were very heavily prof dependent. The courses of digital and power electronics were one of the most interesting courses in their particular semesters, while the one on electronic devices can best be described as a snooze fest.

I took elec as a minor because the subject seemed interesting, and though I look forward to classes, there hasn't been significant learning that has taken place so far. In the courses I took, there were no projects (however, this depends on the professor since this year the Signals course had some really interesting projects), so more often than not studying a couple of days before the exam was all the serious time I devoted to the minor.

I guess what I'm trying to say is that this minor can be made more interesting and hands on, rather than a dry theory course. It gives an outlook as to how electronic devices are made, their working, how to make useful components using them, etc. It also deals with signal processing, circuit physics, microelectronics, VLSI, etc. You need to have some deal of enthu to complete this minor but if you're interested in Electronics and Electrical engg in general, doing this minor is a great value addition.

Biosciences minor - *Archit Bhatnagar*

Taking a minor in an usually hated subject for fresh IITians must seem bizarre and incomprehensible to many. After all, who wants to take a subject which they gave up before with joy? But those who are thinking on this line of thought are in for a shock, for this minor is not just about courses in biology; it is about hard core engineering, but with way more cooler tools.

This minor starts slow; the first course is usually not that interesting, since it's mostly a repeat of BB101. But after that one sees concepts learned in chemistry and physics playing a very central role in biology.

One can have two branches in this topic: Genetic & molecular biology and biomedical engineering.

The former exposes to the learner the application of conventional fields like Thermodynamics, electrochemistry, and quantum mechanics to the complicated structures of the biological world work and then showing the use and power of the tools that can be developed from these.

The latter focuses more on healthcare devices, explaining how they function, why they are built the way they are and how can they be built. This branch is much more similar to conventional engineering approaches; just has biological overtones added to it. Instead of diving into core biology, this branch takes a cursory view and then extracts portions required for developing applications.

This minor does not require much math, but does require a razor sharp mind, ready to accept extraordinary cases and to think out of the box. This minor does not demand from you much to get good grades (in fact the professors usually give a good grade for a fair amount of work), but it does offer unconventional methods of thinking and testing (these will probably be the only exams where you would have to think for much more time than to write the answers), and good springboard to explore other courses offered by Biosciences and Bioengineering department.

So, if you wish to take this minor, go ahead and take it, for professors usually won't refuse entry to the course although it might be useful to keep the lost diadem of ravenclaw handy (just in case).

Aerospace Minor - *Sheetal Jain*

It is a slightly different minor, compared to other Minors offered at IIT-B. There are one compulsory course (AE153 – Introduction to Flight). It runs in the Autumn semester. Other than this course, one is required to do 4 other courses (all 6 credit courses) by choosing from minor baskets defined for Autumn and Spring semesters, respectively. Note that some prerequisites have equivalents in other depts. (like Mech.) so clarify, with the prof. taking the course if you have already done the equivalent required courses or not.

As for the pros and cons about the minor:

Pros –

- Basic Physics Content and simple Math required
- Courses very well taught, and attending lectures highly beneficial and fun
- Well defined course content covered rigorously

- Medium time demand of courses, so don't interfere with core curriculum

Cons –

- Dedication and compulsory attendance strictly demanded and enforced
- Most courses not offered in slot 5 (advantageous for those targeting dual minors)
- Project work and weekly assignments which are instrumental for performing well
- Linked topics, so flow between classes must be maintained
- Challenging Quizzes and Exams

Management Minor - *Nishit Dedhia*

The Management minor is an interesting introduction to the world of management consisting of 5 introductory level courses on marketing, accounts and finance, operations, human resource and project management. It is a well-structured minor providing a good framework for students to explore any interest in management and create a base that can help decide their future. Every course in the minor has an upper cap of 40 students making it competitive and since 5 courses need to be done out of the 5 available, students aren't left with a lot of choice. The courses are interesting and intuitive and involve case studies and presentations which may interest students and provide a good change from the core courses. Since the courses aren't very heavy, enthusiastic students usually sail through given their attendance is usually in the higher range. Students with any inclination and a basic level of sincerity should definitely give it a shot.

Entrepreneurship minor - *Harsh Ranjan*

To become an entrepreneur you don't need to have a great idea to begin with. It is a skill which can be learnt. Entrepreneurship in itself is an iterative process and something which cannot be taught theoretically. Thus the ENT minor is more about the pragmatic aspects of entrepreneurship. This is one of the major reasons why I personally like the ENT courses. ENT courses are very different from your core theory courses, the exams also mainly comprise of case studies and applications to real life problems. In a few courses (eg Marketing for entrepreneurs) there were no exams, only assignments and project submission. Even the proof of concept courses require major work only on your projects. The lectures sometimes are quite monotonous due to the style of a few professors, but some professors are really nice. Another good thing about ENT courses is that there are many lectures by guest speakers and thus they expect you to attend these lectures, otherwise attendance is pretty chill (but that will again depend on the prof). CPI cut off is not really an issue. The minor is not really a 'must' if you want to become an entrepreneur but you'll definitely find it interesting.

BRANCH CHANGE - a Decision that Changed me?

Branch Change - an opportunity given to the to-be-sophomores is a very important decision in any prospective Branch Change aspirant's life. It can change the course of their career and affects numerous other aspects as well, akin to choosing your branch after JEE. Hence, here are some testimonials by students who changed their branch, and by some who didn't even when they could. These would help you in retrospecting the consequences of the result and how the coming experience is going to be like.

Karthik Mahesh (CS to Aero)



I've always been fascinated by airplanes and spaceflight, ever since I was a kid, and my decision to fill CSE as my first choice discounted that entirely. Over my first year, I came to realise that I had not made the correct decision, and a career in CSE would not offer me the satisfaction I wanted. Considering this, changing to Aerospace was almost a done deal for me. Looking back a year later, that decision affected me in more ways than one. Academics is easy, not because of Aerospace's reputation as a 'chill' branch, but the fact that it

comes naturally to me when I am studying stuff I am really interested in. I also have a lot more free time to put into extracurricular activities like managing the Aeromodelling club, musical interests and many more. Changing your branch need not be a 'leap of faith' if you have faith in yourself, and if you know that you've made the right choice in wanting to pursue a career in whatever you're changing to.

Pulkit Sareen (Meta to Chem)



I wasn't determined to change my branch when I joined Metallurgy department. I didn't study all day long for a branch change. My view on BC earlier was like "Ho gayi toh theek hai, nahi hui, tab bhi theek hai". It was just a matter of luck I got into Chemical. My mother didn't want me to pursue engineering in metallurgy. She was quite unhappy with the branch.

For someone who wishes to 'chill' and spend time in non-academic activities, Chemical is not the branch for you. The work load in chemical is much higher than in Meta. If you wish to be a topper, it is much easier in meta as compared to chemical. I don't regret my decision of BC to chemical as it helped me widen my friend circle and also kept me occupied all day long. For freshmen, it is a very

difficult decision. You need to look at if the branch interests you or not, and whether you would be able to manage higher competition. If you are interested in a technical job, your branch will matter the most. From a non-tech point of view, it really doesn't matter in the long run. All that mostly matters is the CPI.

Chinmay Talegaonkar (Elec DD to Elec Btech)



At the end of first year, due to a good academic performance, I could take my chances for a branch change. I took a lot of factors into consideration before deciding my preferences. I was interested in switching to CSE as I developed an interest in first year, but wasn't very sure of my chances for either CSE or Elec Btech. The question of the hour, was whether to stay in the 5 year program or shift to a four year one. After consulting a lot of people from a spectrum of backgrounds, I concluded that staying in elec dual is better for me

than shifting to a 4 year course of any other department even if don't get Elec Btech or CSE. Hence I decided to try for Elec Btech if not CSE, as it would give me more flexibility in choosing my courses. I was not at all sure about research as a career option, therefore shifting to Elec Btech made more sense at that point. The Elec department allows converting to a dual degree if you are interested and have a decent academic standing. Shifting to Btech gave me the freedom to choose extra courses and activities which I wanted to try out.

Don't aim for a branch change based on your perceptions of a department prior to JEE. Make a decision based only on what aligns with your interests. Also, don't make a huge fuss out of it. Whatever happens, happens for good. Even if you don't get a branch of your choice, if you are passionate enough, you can still carve out a niche for yourself. This place is full of many such exemplary people, who at some point were as new to IIT-B as you guys are right now.

Anmol Mishra (Aero to CS)



Post my first month of classes, I saw a clear relationship between my interest in a particular course and my preexisting knowledge of that subject. My interests switched a lot throughout the year, and the inner debate between various branches never seemed to settle. Ultimately, my 5 years of coding experience from school, and an AP in CS101, sealed my decision to switch to CS.

This has been one of the best decisions of my life so far. I've felt challenged like never before, surrounded by some of the smartest

people in insti. The courses are engaging, relevant, and their applications range from our daily life to the state of the art in the industry. Most of the courses have lab components, which make us quite equipped in doing tangible work, one of the reasons why CSE students can take up heavy internships from second year itself.

CSE is truly a microcosm of the best institute has to offer, be it in peers, faculty, labs, internships and the work culture in general.

With all this good stuff however, comes the responsibility of keeping up with the demanding environment. The workload is enormous, there are labs which involve your entire week, and plagiarism checks strong enough to ensure you don't dare copy. You'll get much less time for extracurricular compared to other departments. If you're truly interested however, and motivated enough to put in the work, CSE is definitely the place to be.

Anmol Kagrecha (Elec DD Sophomore)



It has been over a year since the choice of branch change was presented in front of me. I had a choice to change by branch from dual degree program in electrical engineering to the B.Tech program in electrical engineering. Having thought carefully about the decision, I decided to not change my branch.

The reasons were pretty simple. Firstly, I was interested in a research career. Passing out from a dual degree course seems better for a research career. Spending a year on a project in the 5th year is more likely to produce better results than spending less than six months doing a B.Tech project. Moreover, dual degree students have extra courses 3rd semester onwards which are focussed on their specialization. There is another important reason for continuing in a dual degree program. IIT Bombay is one of the best institutions in the country having numerous facilities and excellent infrastructure. Having an extra year in the institute will certainly enable me to utilize the facilities and the opportunities to a greater extent. Accommodation, internet, libraries, labs, environment, students, sports facilities and probably everything in the institute is very conducive for overall development. In retrospect, I don't have any regrets for not going for a branch change. I enjoy the courses offered by the department and my spirit for higher education hasn't dampened in the last year. Further, courses and opportunities are hardly any different for students in B.Tech program and in the DD program. Moreover, knowing the fact that I have an year more in the institute enabled me to experiment more with courses, positions of responsibility and many other aspects of life in the institute.

Divyanshu Gola (Aero Sophomore)



If I rank decisions that I have taken in my life on the basis of their toughness, not doing a branch change comes second on the list, first being taking Aero with an AIR in top 500. At the end of my first semester, I got a high CPI and the idea of branch change took over me. As I went through my second semester, while doing the course CS101, I realized that I was not developing any interest in the course. Besides that, taking up CS with no real interest in C++ and competing with the top students of India wouldn't have allowed me to explore

anything except the burden of the branch. It's not that I do not like coding, I love to code on Python but not at all on C++. In hindsight, I think that it was a good decision, as I am developing interest in aerodynamics along with enjoying what extracurriculars IITB has got to offer, mainly sports.

To the freshmen, I would like to say that don't change your branch on the basis of your CPI or on the basis of the hierarchy set by others, instead first look whether you are more interested in that branch as compared to your present branch, whether you will be able to give time to the extracurriculars you like and most importantly, what you want to do in the future.

Source: Insight article titled "To BC or not to BC?" published on 12th May
Courtesy: Rishabh Israni, Chintan Savla
Chief Editors Insight, Student Media Body of IIT Bombay



THE DUAL DILEMMA - *by Anmol Gupta*



This section is not specifically related to Branch Change, but relates to the much larger student population in general. Of course, you're free to draw parallels between this piece and the everlasting dilemma between opting for a 4-year program in a branch over the 5-year one - which finds its way into a lot of students' preferences, or should I say, anti-preference for Dual degree programs - at the time of admissions as well as at the time of Branch Change.

So, if you somehow end up (or have been) in a dual degree program here after the Branch Change results, please do not feel depressed and give this section another read.

Beginning with my case - yes, you guessed it right, I'm a Dual Degree student (in Electrical Engineering, if that makes any difference) and had missed the 'golden chance' to BC into Elec B.Tech by a meagre 0.05 (again, if that makes any difference). And honestly it did feel bad at that time, but I've been fortunate enough to have gained sufficient knowledge and experience by talking to a number of seniors and participating in a number of activities in my sophomore year that broadened my perspective on this issue.

"Why this piece?"

To begin with, there's a certain stigma against a Dual degree program in the insti (surprisingly) as well as in the society at large (unsurprisingly, of course) - majority of which is fuelled by the common notion of 'IIT/India se M.Tech ka value nahi hai' and/or 'Why spoil one year here and when you can rather do a good job or do MS from abroad?' And then there's the more senti version, 'My friends will all leave after 4 years, what am I gonna do alone?' I will try and debunk some common myths and answer to some common questions that surround a dual degree at IITB.

As for the first notion, some people attribute it to GATE being (apparently) easier than JEE and hence producing lower quality of students (sic), but there's your answer - even DD students have come through the same examination as B.Techs, and all the companies and universities know that well!

"What will happen at the time of my placements?"

If you're thinking objectively long term, being in Dual degree gives you a natural advantage over the B.Techs sitting with you for core placements since you have more knowledge and more experience than them (quite an obvious point, yet not realized by many).



“Semester-exchange”

This one is in fact a point in favor of DD. Being in a five year program gives you more time and freedom to go for a semester exchange in a foreign university, which is an amazing experience in itself. The people you meet, the places you see, the life you live in those 4-5 months - it's something that you cherish for the rest of your stay here and even after that. Have a look at the numbers yourself to observe the proportion of DD students to B.Tech students going for semester exchange.

“What if I plan to go for higher studies?”

If you're instead planning of going for higher studies, then again you have an edge over the B.Techs because of doing a proper thesis/DDP in your research area; a BTP can never be as involved as a decent DDP. In fact, a lot of students directly gain admissions into PhD programs at esteemed universities abroad, something that's a little tough for B.Techs, not having completed a Masters degree.

“What if I don't like my branch and want to pursue non-core?”

Even if you wish to pursue a non-core career, then the 5 year program gives you a lot of time and opportunities to build a really good profile in your sector - you can take up more courses that suit your preferred area, take some really good PoRs, can do more internships (only in some cases, otherwise it's totally dependent on your professor), and participate in a lot of 'non-core activities' in general, in insti as well as outside. What more, you get one extra year than B.Techs to prepare for your interviews!

“Too many courses to handle - all work and no play?”

Talking about the workload - yes, you will have to do one extra course per semester than your B.Tech counterparts, but then that doesn't matter much because the B.Techs also take up lots of extra courses during their stay here and things pretty much balance out. It's just that they would have slightly more freedom because they are doing less core courses than you. Looking at it from another angle, you get to learn better time management! And take this from someone who was involved in a more-than-sufficient number of activities - it is definitely manageable.

The ever-so-senti: “Mere dost sab 4 saal baad chale jayenge!”

You would still have about a 100 other students of your batch studying with you, and trust me, we all (DD students) already have started forming close bonds because we know we are going to stay together for one more year, and it feels super-cool to find out that who

all are in Dual degree and are going to be with you for the fifth year. You would have your batchmates to keep you company as well, and as for the part after '/', well I guess my next point answers this better.

"5 years is too much time!?"

Being in a dual degree right now, for me the 4-year program actually feels a bit rushed :P. Specifically talking about IITB only here, there's so much to do in the institute, that 4 years feel like a very short period for exploring the stuff. When you know you have 5 years here, you tend to explore more and gain a broader perspective of what you want to do in life after IIT. It's like giving yourself one more year to face the world with better preparation and plans (heard about 4 hours out of 6 for sharpening the axe? It's the same thing here).

So, all in all, whatever your program be, you are going to turn out just fine - better make the most of these remaining 3 or 4 years you're here at this wonderful place!



JOURNEY REVIEWS

Some bit of advice from someone experienced always helps, so we asked a few of your seniors about their journey and a few things that they'd like to tell you...

Ankush Thakkar



Before you go on to read this piece there is something important I've to tell you. It's vital but since it's so common it's taken for granted or not realised to its full potential.

Congratulations.

For what? Well, you've completed the first year at (in my opinion) India's finest institute. Besides the grandeur attached to it, pat yourself on the back. It wasn't as easy as you would have imagined was it? The first year throws a lot at you, opportunities, options,

chances and challenges. We could rejoice that we've got so much exposure and opportunities that others don't, we iitians know very well that more options just make the multi-choice question all the more gruesome.

Enough patting on your back, let's get down to it.

Second year. Sophie year.

Promotion? Well, depends on how you've learned from your initial experiences.

I'm going to dive into some specific details here, to those craving a tldr, skip the next three paragraphs. There are three important aspects you should inculcate as you step into the most important year of your stay here.

The first one is a natural but often forgotten in all the resume and insti PR cravings - personality growth. It's easy to choose something that looks good on paper or to the people around you. But, the crux is are you learning something new? Are you mastering a skill you've just developed? Are you improving as a person? If it's yes for any of the above I'd say go for it. No one denies the importance of your resume, and how it's important to have good connections in insti. But those are secondary if you're not learning anything. You might see people going ahead of you temporarily but trust me, in the long run, it shows and especially when it matters most.

Secondly, 'flow' or as I like to call it, insti hawa. Seniors are important, their guidance is crucial. They're in the 'been there done that' category so they do have a good idea of insti matters and it's functioning. And based on what you hear you frame a view that this is 'dude' or that is 'shit'. Though I appreciate the crisp opinions they aren't all true. It's easy to feel 'abbe PoR nahi milli, ab kya hi karunga?', 'Second year intern nahi kari toh third year ki kaise lagegi?' Well, these are all conventional methods, tried and tested. I don't doubt their

success in any measure. However, try to understand this isn't the only way. You're in I.I.T.B. Opportunities aren't scarce! You'll never run out of things to do.

Set goals, not paths to the goals.

Failing to reach the goal from one method doesn't mean there aren't others out there. It's just when you're down, your vision is blurred and you fail to spot them. Get up. Get out of your room. Go make new ways to get there if they don't exist already. Go make the next success story this insti will witness.

Third is unconventionally important. It may not be of much benefit but it's what you owe. It's responsibility, one that you should understand. You've been promoted from 'tu' and 'tum' to 'aap'. There are 900 people entering insti who will look up to you. Help them out like you seniors did. Give them the guidance they need. At the same time, bear the responsibility of a leader. It's where you grow and learn the most. Though it's glam, it isn't as easy as it sounds. Throughout my stay I believe I've grown to be what I am through my working with people and leading them into a variety of avenues. It isn't something you'll get to experience everywhere. Capitalize on the opportunity presented to you.

Welcome back 'tldr-ers'. Long story short, you'll be presented with opportunities, loads of them, make the right choice and if you don't get what you want in one way remember there are multiple others to reach there. Shoulder all the responsibilities you get, for if you didn't push yourself beyond limits you think you can reach, you didn't really grow, did you?

Wrapping up I'd say, learn, grow, think about your future but live a little. Don't have regrets after your four or five years here and enjoy you next year. It's not going to be easy. First year was tough? Welcome to the real game. This will take a toll on you but you've got to enjoy it. Pressure brings out the best in us.

Ironically, all the time talking about not following seniors blindly, I'm asking you to believe in what I'm saying. Well, I'm not. Feel free to treat this piece as another motivational/guidance piece you read and forgot. And for those that may feel this seems fair and have questions, you know where to find me.

Oh and yes, CPI is important. Yes it will determine your future. Yes your job also relies on it. Yes you have to get it up.

Adios, enjoy your next year. You're only a Sophie once. :)



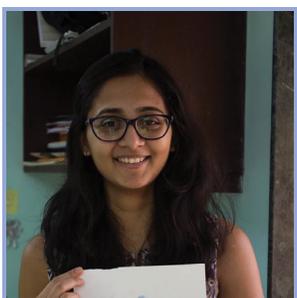
Sapan Shah



If there's anything of note that I'd want to educate the sophomores on, it would be three pieces of advice:

- 1.** If you find yourself sitting in your room watching TV shows more than 3-4 evenings in a row, you might want to pick up something to do. It doesn't have to be a PoR or a sport. It could be anything. Take coding lessons on Hackerrank, for example. The insti is your oyster, and you'll inevitably find something you enjoy. Just don't stay idle.
- 2.** The insti is bursting with opportunities. If you miss one, the next one is right around the corner. Be patient and smart about what you want to do.
- 3.** Not everything a senior tells you is a good advice (the above included). Take everything with a pinch of salt, and consult as many people as possible before you make a decision.

Shraddha Rana



Dear Sophies

Your first year at IIT Bombay must have been pretty amazing, right? I sure hope it was. I remember mine so fondly. I had won like a dozen t-shirts in orientations. InterIIT was so much fun and I also received Institute Sports Special Mention for the same. I got my one and only AP. We even completed our ITSP project, surprisingly. Never had a single year been so exciting in my entire 16 years of existence so far.

I'm sure most of you will share this sentiment with me. But there's a little more to insti life than this, as you'll see in the years to come. My seniors were kind enough to help me during all my minor, major and even non-existent crises. So here I am, trying to do the same for you, as I leave behind wonderful memories in this place I will always consider home.

Dear Sophies,

You're smarter than you were last year. You know more now. But not as much as you think you do. Always be humble. There is so much to learn from everyone. Be kind to your juniors and respectful to your seniors.

No one will deny you help. Don't be shy to ask for some. Be it a mere pen or counselling sessions. There is no shame in asking for help. God knows how many times I've cried on my friends' laps. And at the same time, help others. Even if it is 5 minutes before the exam and you're in a frenzy yourself.

Study what you want to, because YOU want to. Grades matter, but not as much as understanding and applying your learnings. I got a 7 in my DIC, but I'm still going to

MIT. (Not trying to brag) That is because I like studying what I am studying. Don't opt for electives because you'll get easy grades. Go for ones that you truly want to know more about.

POR doesn't define your worth. Go for PORs only if you're passionate about that cause. Only then will your work reflect excellence.

Don't be afraid to fall in love. Don't be afraid to express your love. But at the same time, don't forget to respect the other person and their decisions.

Have a hobby. You need a break from academics every now and then. Don't spend that time just watching TV shows. Draw, dance, sing, run, walk along lakeside and write poems. Do something selfish like this, that is purely for your own happiness and peace of mind.

DO NOT JUDGE. You don't know even half of the other person's story. Don't assume so quickly. Get to know them. And then if you don't like them, that's fine. But don't think a girl is a slut just because she wears a crop top. Don't think a guy is stupid just because he can't pronounce some words in English. Don't think you know someone when you've never even talked to them.

Internships are important. They give you a taste of work life post graduation. But stipend is not. Honestly. Don't sign up for JAFs because everyone else is or because their pay is attractive. Do internships in fields that you are interested in. Do something that you think will make you feel productive. Not doing an internship is a legit option too. I personally liked to chill during freshie and sophie year vacations.

Find academics difficult? Attend lectures. Sit on the first bench. Listen to everything the professor is saying. Make good, comprehensive notes. Don't be afraid to ask for help from professors and peers. Half your work is done there.

Make friends. Talk to the guy sitting on your right in class. Chat with the girl beside you in the TumTum. Ask mess didis and bhaiyyas about their day. Visit your wingies' rooms for at least 5 minutes everyday. At the end of the day, they're the ones who'll be a measure of the wholesomeness of your life here.

I know all of these are repetitive. None of it is something you've never heard before. But you see, that is exactly the point. The reiteration affirms the truth in these statements. This is just a simple reminder to help you pace through the coming years. These four years have made me grow in ways I'd never imagined. I've grown more passionate, adjusting, understanding, accepting, stronger and smarter through my journey here. And I realize this only as it is coming to an end. Insti has the power to shape you into a beautiful human being and meet other lovely people along the way. You just have to let it. Nothing you do is wrong, as long as it brings you happiness and harms no other.



Rishabh Choudhary



As an IIT aspirant my journey commenced when I got Chemical Engineering here at IIT Bombay. As it's said, 'You don't choose your branch, but the branch chooses you'. Chemical engineering is a generally unknown branch to most of the IIT aspirants and their parents but is certainly a great one.

It was suddenly a great deal of change in the environment and the people around, when I came here from a small northern town.

The weather was wet and dark as I remember it during the initial weeks. We were the first batch to get the newly built hostel – 15 and it made us feel quite lucky (but it was not the case actually). I always wanted to join IITB because I knew about the culture and exposure one gets here and soon was realizing it due to a plethora of orientations organized by the respective student groups in tech, sports and cult.

Before I even started preparing for JEE, I was passionate about building and understanding machines and thus from the very start, I was interested in technical activities in the institute. I attended almost all the activities organized by STAB and it was really a transforming year for me. Also, I was in NSO swimming which helped me achieve a good fitness level. The year passed in a flick and here I was – a one year old IITB student and thus a 'sophie'. I became the convener of Robotics Club and a new perspective came to my life. Discussions and planning for the coming year and what to bring new so that the freshies will be more interested in participating in the club activities; It was really awesome because suddenly we were not freshies and our thoughts were given a lot of importance. In the same year I took the best decision of my life and joined Unmesh Mashruwala Innovation Cell (or SINE lab) which certainly put me on a path of knowledge and exploration and I learned how to build state of the art robots as well as gained leadership and interpersonal skills. My time in Innovation Cell was very thought provoking and equipped with immense learning. Actually, I was so carried away in staying and doing something in the lab that I just forgot I had to attend classes and give quizzes to complete my courses which led to shocking SPIs in my second year and that brings me to the point that whatever you do here in insti just take care of attending classes and give all the assignments and quizzes on time.

I can't forget to mention the role of wingies during your stay here. The bonding that develops will be forever and I can say that apart from the fun we had they played a huge role in helping me steal this dreaded degree of B.Tech. in chemical engineering as I was spending most of my time in the lab. I was enthusiastic and excited about autonomous robotics and taught myself Programming, Machine Learning, basic Mechanics and

Electronics etc and soon I was leading projects and mentoring people in technology from almost all the disciplines and seniority levels.

I was in a lot of groups in the insti (mostly technical though) and made some very close friends with whom I did night outs and went to maddu in the morning and I felt in those moments that these are the things preparing me to face the world after my B.Tech. IITB opens a sea of opportunity for you and I will strongly advise you to go outside your room and grab them.

Well if you have come here just for the 'IIT tag' and academics, then you are missing the major things this great campus has to offer. Always remember that after some time when you look back to your IIT times, you shouldn't just remember the competitiveness, the rat race or the name of the company of your first intern and job but what knowledge you gained, the satisfaction that in those years you were really able to come out as an individual and you did not just complete your degree for the sake of it. If you are here for big packages then you just wasted a large part of your teenage life in pursuing the wrong goals.

Here is the point dear newbie sophie, 2nd year is the one when you can really spread your wings and explore well because you have the experience of one whole year here excluding the pressure and tension of internship and job in the next two years.

So, just take that extra effort to do whatever you want whether it is starting a new sport, exploring a subject, photography, fine arts, some project etc. Go out on trips with your besties and make some permanent memories and always remember that give importance to holistic learning, start seeing the bigger picture and never let anyone restrict you in pursuing your dreams.

This one is for all of us engineers and I quote -

"Science and engineering is meant to liberate,
So start dreaming and engineer the world of your dreams"



Yashraj Bhosale



Coming into IIT one thinks that the competitive atmosphere must have subsided and that there's no need for rigorous study now. However the real competition and the struggle to build your profile from rags begins right here.

Maintaining a decent CPI for the first year is a must however many important decisions of your Insti life have to be taken during the sophomore and third year. Figuring out your inclination of core or non core and working towards it by taking up research projects, summer internships or winter internships is extremely important for the future.

Coming from a research background, I would recommend that taking up academic projects under the guidance of professors or contributing to tech teams in our insti surely plays a great role in building one's profile towards industry and research oriented career. Besides this your activities in sophomore year also play the most important part when it comes to securing the most important third year internship. If you take up a position of responsibility (which I personally recommend you should, as it is the first step towards developing a sense of management and responsibility in life) make sure you do justice to it.

Stay focussed on your acads, work towards your profile and start developing a sense of responsibility towards life, that's it from me, Yashraj Bhosale, 2017 IITB graduate and currently joining University of Illinois Urbana-Champaign for my Masters program.

Ashwin Kanhere



IIT Bombay is a sea of opportunities where one can grab the bull by the horns and change the direction of their lives with great ease. Looking back, there are things that I would've done differently, things that I wouldn't have done at all and things that I would've like to have done more of in my stay here.

My journey across the four years primarily consisted of academics, internships, mentoring and sports organizational work. All of these aspects allowed me to find out what it was that drove me and make a decision that would help me shape my future better.

What I actually did?

I swam a lot in my time at IIT Bombay. I started in my first year and practiced quite regularly and hard for the Inter IIT in my first three years. In my fourth year, I didn't practice as much, but still managed to pull through based on my work from previous years. I took part in a few academic projects over my second and third years and had an involved internship at a drone startup over nearly half an year.

I started mentoring students in my third year. I was a DAMP mentor then and an ISMP mentor and DAMP Co-ordinator for my final year. In and around this, I also happened to do a lot of other stuff that was a lot of fun but didn't really have a tangible impact on me; like helping guys in elections (both my guys lost unfortunately), writing blog posts online, reading more and watching more movies. Contrary to the activities that appeared on my resume, a lot of these activities actively shaped my thinking

What if?

In hindsight, I believe that I spent a little too much time devoted to swimming. While it did allow me to do exceptionally well in Inter IIT contests, it also took away time that could've been spent learning a new skill or diving deeper into research or cultural activities.

The biggest regret that I have from my work on academic projects is my sheer laziness. As I learned later, it is very important to stay self motivated while working on a research project. One might not be able to see the direct impact of what you're working on. Also, working in such a situation is often without external motivation or pressure, something that we in insti are used to in order to achieve our objectives. Meeting deadlines without an external driving force is something that I believe I need to learn, and quickly.

My internship was one of the best academic experiences that I've ever had. My internship at NAL in the summer after my second year allowed me to delve into the world of research and gave me the delight of learning that something that I'd come up with completely on my own had also been done by other people from renowned universities worldwide. However, due to the archaic nature of the problem, I was unable to publish a paper on the topic.

My internship at Drona Aviation instilled in me a passion for unmanned aerial vehicles. It became instrumental in helping me decide my future. One such internship, where you can be close to the ground reality of your future interests is something I would recommend that every student do.

Mentoring was a great experience because it allowed me to get in touch with students who were in the exact same situation as I was 3-4 years early. This gave me a special perspective on how I had changed over the past 4 years. 4 years is a lot of time. And knowing how you were when you entered the institute provided a moment of rare reflection on what the past held and contemplation of what the future might hold.

Advice?

I was also tasked with providing you guys advice. I don't really think that I'm experienced enough to provide you with advice but I will say this - there are people who are better than you in any given field. Accept it, and accept their help. You can only gain from such a situation. Given a choice, I would try my best to avoid my regrets, so I would also recommend that you prevent laziness and lack of a work ethic from taking away from you what could've easily been achievable.



Chandra Maloo



Congratulations on having completed, I hope successfully, around a quarter of your insti journey! The transformation from a noob freshie to a mature sophie must make you proud, though you still have a long way ahead! I want to share some thoughts to help you make the max of your insti life.

Know yourself: It is important to be clear about what you stand for, what are the things dear to you and to hold onto your dreams. Keep introspecting every once in awhile. Don't lose yourself.

Be open: At the same time be open for new ideas. One of the most important things that insti does is exposing you to a wide variety of issues and topics you won't even have heard or thought of before. Try to take as much as you can and merge those the best you can with your pre-existing beliefs.

Meet people: Insti is a store-house of people with varied, highly contradicting yet self-coherent ideologies. Having quality discussions with your peers will broaden your perspective.

Read books: This is one thing really difficult to accommodate in our tightly packed insti schedule, but something as badly needed. The marginal learning curve of reading has a better gradient than most learning opportunities in the institute. Reading books will make you not only knowledgeable but also wise.

Build Identity Capital: Sometime down the line you will realize that your personality and skill sets are much more important than the things you have on your resume. Focus more on the former aspect than the latter.

Value relationships: Take care of your friends like your family. Be available for people and never fail to lend a helping hand. Your one small act of kindness can be life changing for someone. Do watch the movie *It's a Wonderful Life*, it would be worth your time.

Marginal Learning: Whenever you have to weigh two opportunities, which you will have to do almost everyday in insti, look at the marginal learning you will have rather than the absolute learning the particular avenue has to offer. This is one thing I sometimes failed at but should always be considered in decision making.

Advise carefully: Sophies have the best opportunity to interact with freshers and mentor them. Take this opportunity with responsibility and realize that your advice would set the base for their life ahead. I have often heard juniors blame a particular senior for misleading him/her in the freshie or sophie year, unknowingly. Don't force your life stories on others and when you are unable to guide a junior be humble enough to redirect him/her to someone who would be able to.

Take care: Well, taking care of health and fitness is mostly there in everyone's to-do list. But this often come towards the end on most priority lists. Try to push it up, as much as you can. That's all I feel like saying here.

PS: These are some of the aspects that I feel can enrich one's insti experience. Use your own judgement and discover your own path. All the best :)

Harshit Manocha



Dear Newbie Sophie,
 Congratulations! Yes, you wouldn't be the *Tu toh abhi Freshie hai* anymore. It's been an year since you became part of this wonderful place aka Insti. Well, 'aka' because you would have seen a valfi by now and some of you might already be planning their own. [Haha. I was when I became a Sophie.]

So I wanted to write this one because I guess I had too many close friends by when I was a Sophie, hence was lucky to experience multiple Insti-Life Journeys and each one taught me something, and

I guess sharing never harms [Except Franky, woh Personal hota hai]

So yeah, Sophie year without doubt is very special and the maximum Delta change that you might feel. You will realize how far H2 and H6 are when your hostels split and your best friends aren't a staircase away. You will realize how weird it is to eat in a Non-Common Mess with the awkward sex ratio. You will realize classrooms are smaller and amount of surveillance/person is higher. You will realize what it means to pick a common course with that friend who doesn't sit in the same division anymore. And a lot more small day to day changes would open up as you enter into this beautiful period – Sophie year.

[Senti Tip #9104 – Make sure you meet up outside LCC with the group you made in freshie year or just the acquaintances from your division or freshie hostel]

Among more gyan that I wish to dissipate, one thing that always topped my list of *Things I would pakka tell a sophie* would be –

Basically Insti works in a loop, with some rare galactic collisions once in awhile (like imagine one day liquid soaps might get removed, or wait. shit!). But yeah, coming back - a loop. Still, every year you get quite a different view of the same thing. Like for me, Kaladarshan aka KD as an enthusiastic freshie who made this huge telephone, a sophie who was super senti for pulling of a theme and working night out after night out, a thirdie who just wanted to visit it and not work, a fourthie who wanted to do it simply because well **Fourthie-FOMO** and whose favourite senior was the OC (Woohoo!). Haha. It means different every year, And that's the beauty!

Why all this senti? Well, sophie year might become the turning point of a lot things you do in your insti life - and life in general!

Yes, You can change whatever you wish to do at any point in your life. And I really wish you get those chances. But a small advice, just because I saw this more as a pattern. You might have tried a lot of stuff by end of Freshie year. [If not, go ahead, insti god hail. But for those who did or have some idea about what to pick, make sure whatever you are doing is basically because you are enjoying it and loving it and not because it will look good on your resume. [Lol - yes, second year resume is a thing]. Because those things will change the opportunities you get. So pick wisely - do it for yourself.

A very personal description of sophie year would be to call it the Opening up of a Chamber of Secrets. Haha! A very special thing about sophie year is that you are somewhere in the middle of being not at all responsible for stuff (freshie) and being officially responsible

for stuff (thirdie). And as a perk you get to enjoy responsibility, take initiatives and change stuff while some awesome senior friend takes care of the official responsibility. Clubs, IBs, Groups will have this sweet flavour of them self.

Also, if you aren't a part of one already but always wanted to - go ahead! Ping the most random point of contact and they ll get you in. Insti is perhaps one of the most epic places, where it is never too late.

On a very different Note - let me be honest. It wasn't all sweet all the time. I have dealt with an entire sem of proper depression and have come out of it [thankfully because of the people I spoke about it to]. And I can say there are a lot of you struggling your own battles. And it's absolutely fine to seek help. Talk to people or the *Dimag ka Doctor* and just know it - you'll be great.

There will be things you want, that wouldn't go well. But don't let it get the best of you.

That said. Going back to the Senti fundae of life - the two most special things insti gives you are - people and opportunities. Make the best of them and you shall be just fine. Learn a lot of stuff, Try a lot of stuff and make a lot of memories.

Maybe my *THE MESSAGE* for anyone reading this.

Remember, Insti is perhaps the best testing ground you can find. Be it that weird hair style or the golden flick you wanted to have or that one startup idea that fancied you for way too long now. Just give it a try.

Worst case scenario, atleast you will be sure of what you definitely don't want to do!

Ahhaa. I guess I owe way too much to insti for teaching me so much. But I guess I must shut up now

Hope this helped. If not, deal with the academic council . Haha. They approached. Meine kuch nahi kiya.

Feel free to contact anyone who has ever been at Insti as a student and they'll always help.

Also, start saving some bucks, for the first time now you will also be at the giving end of treats.

Cheers!

- Once a Sophie

