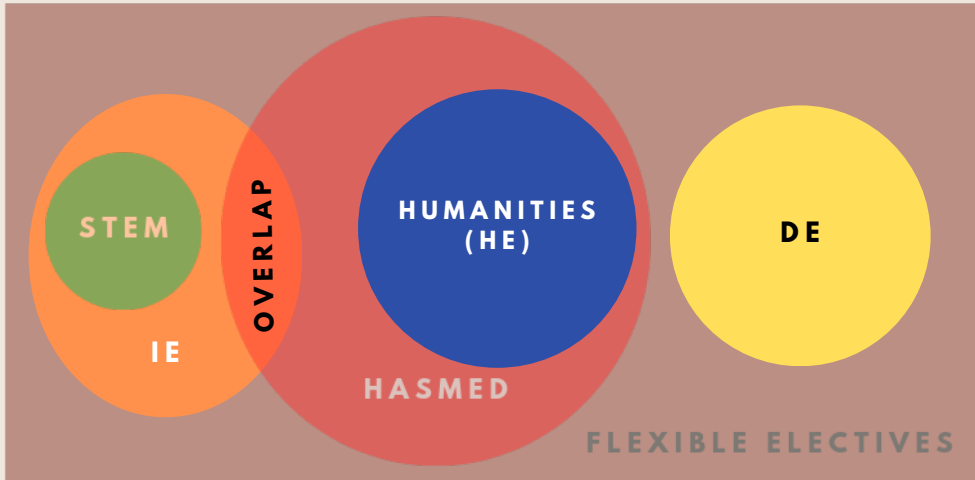


CHEMICAL ENGINEERING HANDBOOK

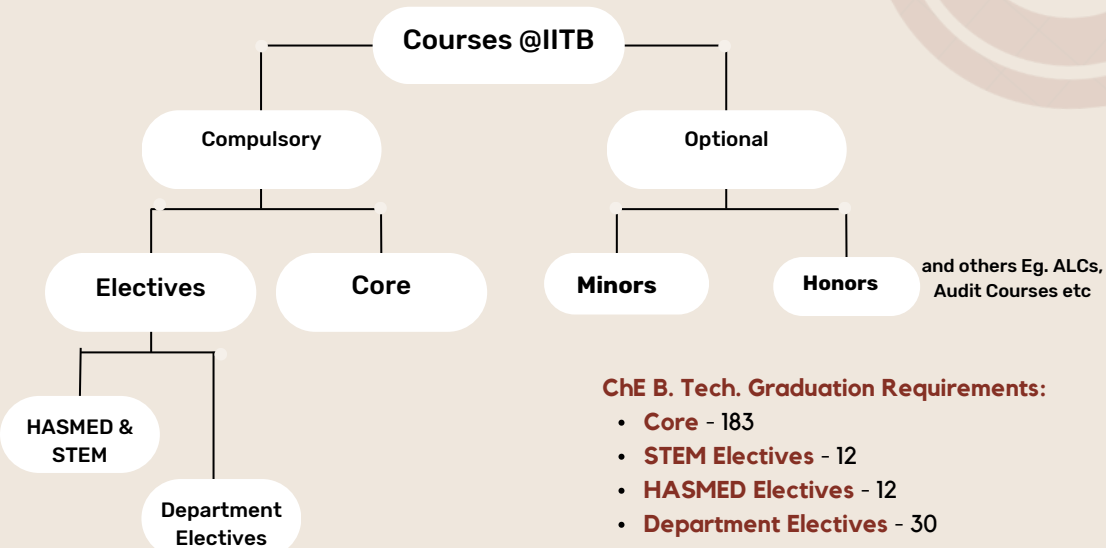


NEW VS OLD TERMINOLOGY



- Institute Electives (IE) & Humanities Electives (HE) and DE are part of old nomenclature.
- STEM, HASMED & Flexible electives have been introduced as the new terminologies.
- Department Electives (DE) remain unchanged !

TYPES OF COURSES AT IITB



ChE B. Tech. Graduation Requirements:

- Core - 183
- STEM Electives - 12
- HASMED Electives - 12
- Department Electives - 30
- Flexible Electives - 30

Total - 267 Credits

COURSES AT IITB

CORE COURSES

Core courses are those set of courses which you have to do **compulsorily** for obtaining your degree. These courses count towards your final degree in all respects and count in your **CPI (Cumulative Performance Index)**. These courses are **NOT optional** and have to be completed within the stipulated duration of your coursework (**4 or 5 years**). There are departmental core courses (Ex. CL 101, CL203 etc.) and institute core courses (Ex. CS 101, DE 250, ES 200, HS 200 etc.). These come by default to your course registration form on Internal ASC during registration.

ELECTIVES

Each programme (B.Tech, Dual Degree, M.Tech, Int. M.Sc.) at IIT Bombay includes **elective courses** in its curriculum. These electives allow students to explore courses of **their own choice** and interest.

Types of Electives:

1. Humanities and Social Sciences (HSS) Electives (Old Terminology):

- All undergraduates must complete an **HSS elective** in their **third year**. Options include:
 - HS 301 - Philosophy
 - HS 303 - Psychology
 - HS 305 - Reading Literature
 - HS 307 - Sociology

2. Department Electives: Students choose advanced-level courses (e.g., **4xx or 5xx**) from Chemical Engineering Department. In some cases, courses from other departments may be tagged as department electives with approval from the concerned department.

3. Institute Electives (Old Terminology): Students choose courses from **departments other than their own**.

- **Restrictions:** Generally, **1xx courses** are not allowed.
- It should not be the core course of the department which has offered the course.

4. STEM Electives (New Terminology): These are courses related to Science, Technology, Engineering and Mathematics.

- **Restrictions:** Generally, **1xx courses** are not allowed.
- It should not be the core course of the department which has offered the course.

5. HASMED Electives (New Terminology): These are courses related to Humanities, Arts, Sociology, Management, Entrepreneurship and Design.

- All ENT and MG courses have been approved by DUGC to be tagged as HASMED. However, for other set of courses (DE, HS, ES, EC, SOM, PS etc.) that don't come under any of STEM or DE, you need to get it approved by the DUGC via the GSec.

Note: Electives are **part of the curriculum** and count towards the **CPI**. These do not come by default on your course registration form unlike core courses, you need to add these by yourself during registration.

COURSES AT IITB

ADDITIONAL LEARNING COURSES (ALCs): Students may take extra courses within the permissible maximum credit limits:

Key points:

- ALCs can be credited or audited.
- Grades in ALCs do not count towards CPI/SPI.
- Courses can be re-tagged during the re-tagging period.

AUDIT COURSES

Audit courses allow students to attend a course for knowledge only, without worrying about grades. So, even these are not counted towards CPI.

Key points:

- A maximum of two courses can be audited during the entire programme.
- Only Category I and II students can audit courses after taking prior approval of the instructor.
- Attendance and basic evaluation requirements set by the instructor must be fulfilled.
- The course will appear on the transcript with an "AU" grade and with "AU" Tag.

SIT-THROUGH COURSES

If you wish to attend a course for **knowledge only** but cannot register due to constraints, you may **sit through** the course with the instructor's permission.

Key points:

- No formal **registration** takes place. So, these are not counted towards credit limits.
- The course will **not appear** on your transcript.

SELF STUDY COURSES

Self-study courses are typically for **final-year students** (post 8th semester or after expiry of program duration) who need to complete mandatory credits.

Key points:

- A maximum of **two courses** can be taken in self study mode.
- Professors provide study materials, doubt sessions, and exams. Normal grading applies.
- Its is registered by submitting the self study form to the department office: [Form Link](#)
- Fees: ₹2000 for General/OBC/EWS, ₹1000 for SC/ST per course.
- Details: It runs usually between the 2nd week of May and the 2nd week of July.
- **Process:** After submitting Self Study form to department office, you will receive a mail from academic office asking for payment before registration. You need to go and generate a payment request from the Academic Office (main building 2nd floor), then go and make payment in the cash section (**offline payment is mandatory**) after showing the payment request, and provide the receipt to the Academic Office. Once processed, course will reflect on ASC.
- Registration and evaluation **follow the academic calendar** (either during normal semester or during summer term), with standards similar to regular semester courses.

COURSES AT IITB

GUIDED STUDY COURSES

- Purpose: Allows **Category I** students to pursue non - core courses in a self-study mode during regular semesters.
- Requires recommendation from Faculty Adviser/Project Guide, DUGC, and UGAPEC approval.
- Limit: Maximum **one course per semester** starting from the third semester, **up to four courses** in the entire program.
- It is subject to the availability and willingness of the instructor.
- Rules: Cannot be taken concurrently with URA; standard credit load rules apply.
- Credits: May count towards Minor/Honours if specified by the academic unit.
- **Process:** Registration, evaluation, and grading follow the same process as regular courses. This form must be filled before registration and submit to the prof: [Guided Study Form](#)

SUMMER COURSES

Summer courses allow students to clear backlogs or complete pending credits.

Key points:

- **Eligibility:** Any student with a backlog. However, if student has registered for at least two backlog courses in summer then the student is allowed to take a course in advance in which he/she is not having a backlog .
- **Credits:** A maximum of **24 credits (4 courses)** is allowed per summer.
 - Extension students may take **unlimited courses** if offered.
- **Attendance:** **80% attendance** is mandatory. An **FR grade** will be awarded otherwise.
- **Dropping:** A summer course can be dropped within **7 days** of the first lecture.
- Students need to pay **9000 INR** per summer course on **External ASC** under Payments section after registering for the course via **Internal ASC** under Registration/Adjustments. Timeline for all these can be known by referring academic calendar. You need not do any offline formality in this !
- Running summer courses can be seen on internal ASC by selecting **semester as 3**.

(C) SCHEDULE OF SUMMER TERM

Sem/Sr.	Event	Date (Day)
3.1	Last date to receive list of summer courses from academic units	30 April 2025 (Wednesday)
3.2	Display of Summer courses list on ASC	07 May 2025 (Wed)
3.3	Registration	14 May 2025 (Wednesday) – 19 May 2025 (Monday)
3.4	Instruction begins	20 May 2025 (Tuesday)
3.5	Last date for course adjustment	27 May 2025 (Tuesday)
3.6	Last date of Instruction	12 Jul 2025 (Saturday)
3.7	Term-end final exam	13 Jul 2025 (Sunday) – 17 Jul 2025 (Thursday)
3.8	Last date for showing evaluated answer scripts	19 Jul 2025 (Saturday)
3.9	On-line submission of grades	13 Jul 2025 (Sunday) – 20 Jul 2025 (Sunday)

Schedule of Summer Term (C)

The following are the key events and deadlines for the summer term, along with their respective dates:

1. Last Date to Receive List of Summer Courses from Academic Units

Date: 30th April 2025 (Wednesday)

2. Display of Summer Courses List on ASC

Date: 7th May 2025 (Wednesday)

3. Registration

Dates: 14th May 2025 (Wednesday) to 19th May 2025 (Monday)

4. Instruction Begins

Date: 20th May 2025 (Tuesday)

5. Last Date for Course Adjustment

Date: 27th May 2025 (Tuesday)

6. Last Date of Instruction

Date: 12th July 2025 (Saturday)

7. Term-End Final Exam

Dates: 13th July 2025 (Sunday) to 17th July 2025 (Thursday)

8. Last Date for Showing Evaluated Answer Scripts

Date: 19th July 2025 (Saturday)

9. Online Submission of Grades

Dates: 13th July 2025 (Sunday) to 20th July 2025 (Sunday)

COURSES AT IITB

NPTEL/SWAYAM COURSES

Students may take online courses through platforms like **NPTEL/SWAYAM**.

Key points:

- A maximum of **2 electives (12 credits)** can be taken via NPTEL for any student at IITB.
- Extension/ARP students can complete **24 credits** of **electives as well as core courses** via NPTEL with **DUGC recommendation**.
- Courses are registered on ASC **after passing** the exam.
 - **12-week courses** 6 credits & **8-week courses** 3-4 credits
- Grades are **not included** in CPI calculations, grades are given out of **100**.
- **Process:** One needs to submit the NPTEL course mapping request signed by the Faculty Advisor as well as course instructor to the DUGC via GSec for approval. After approval, the student needs to register and pay the exam fees **1000 INR** on SWAYAM portal. After completion of course student needs to submit the **NPTEL form** along with printed certificates of course completion signed by the Instructor, Faculty Advisor to DUGC via GSec which will be sent to academic office for reflection of course on ASC.
- Sample Course Mapping (**NPTEL Form**): [Form Link](#)
- The course code for all such courses is **O-IITB**.

Typical Timeline NPTEL/SWAYAM COURSES : One must visit the SWAYAM portal for timelines and strictly follow that, a typical timeline has been given below.

Jan 2025 Timelines

	4 weeks (SET 1)	8 weeks (SET 1)	12 weeks	4 weeks (SET 2)	8 weeks (SET 2)
Start of course	Jan 20, 2025	Jan 20, 2025	Jan 20, 2025	Feb 17, 2025	Feb 17, 2025
End of course	Feb 14, 2025	Mar 14, 2025	Apr 11, 2025	Mar 14, 2025	Apr 11, 2025
Exam dates	Mar 22/23, 2025 2 Sessions on each date 9am-12 noon; 2pm-5pm		Apr 26/27, 2025 May 3/4, 2025 2 Sessions on each date 9am-12 noon; 2pm-5pm		
Possible additional Exam Dates	Mar 21, 2025		April 23,24,25, 2025 May 2, 2025		
Open enrollment to the course	Nov 15, 2024				
Close enrollment to the course	Jan 27 2025 5pm			Feb 17 2025 5pm	
Open exam registration form	Dec 16, 2024 - 10am				
Close exam registration form	Feb 10, 2025 5pm / Feb 14, 2025 5pm			Feb 20, 2025 5pm / Feb 24, 2025 5pm	

NPTEL/SWAYAM January 2025 Course Timelines

The timelines for the NPTEL/SWAYAM courses offered in January 2025 are outlined below, covering different course durations.

1. Course Durations and Schedules for NPTEL/SWAYAM

4-Week Course (SET 1):

Start Date: January 20, 2025

End Date: February 14, 2025

8-Week Course (SET 1):

Start Date: January 20, 2025

End Date: March 14, 2025

12-Week Course (SET 1):

Start Date: January 20, 2025

End Date: April 11, 2025

4-Week Course (SET 2):

Start Date: February 17, 2025

End Date: March 14, 2025

8-Week Course (SET 2):

Start Date: February 17, 2025

End Date: April 11, 2025

2. Exam Dates for NPTEL/SWAYAM

Primary Exam Dates for Courses:

March 22 and 23, 2025 (SET 1):

Two sessions per day:

Morning: 9:00 AM to 12:00 Noon

Afternoon: 2:00 PM to 5:00 PM

Secondary Exam Dates for Extended Courses (SET 2):

April 26 and 27, 2025:

Two sessions per day:

Morning: 9:00 AM to 12:00 Noon

Afternoon: 2:00 PM to 5:00 PM

May 3 and 4, 2025:

Two sessions per day:

Morning: 9:00 AM to 12:00 Noon

Afternoon: 2:00 PM to 5:00 PM

3. Possible Additional Exam Dates for NPTEL/SWAYAM

SET 1: March 21, 2025

SET 2: April 23, 24, and 25, 2025, as well as May 2, 2025

4. Enrollment Period for NPTEL/SWAYAM

Open Enrollment:

Begins: November 15, 2024

Close Enrollment:

For 4 and 8 week courses of set 1 and for 12 week courses:

Deadline: January 27, 2025, at 5:00 PM

For 4 and 8 week courses of set 2:

Deadline: February 17, 2025, at 5:00 PM

5. Exam Registration Period for NPTEL/SWAYAM

Open Exam Registration:

Begins: December 16, 2024, at 10:00 AM

Close Exam Registration:

For 4 and 8 week courses of set 1 and 12 week courses: February 10, 2025, at 5:00 PM / February 14, 2025, at 5:00 PM

For 4 and 8 week courses of set 2: February 20, 2025, at 5:00 PM / February 24, 2025, at 5:00 PM

MINORS

A **Minor** is an additional optional academic credential or degree that a student can earn by completing **30 credits** (typically five 6-credit courses) in a discipline other than their major field of study in the B.Tech program.

1. Eligibility Criteria

- Each unit offering minor prescribes a specific set of courses and/or projects required to earn a minor degree.
- Students are eligible to pursue a Minor starting from the **3rd semester**.
- Dual Degree (DD) students in categories I and II can begin registering for Minor courses from their 2nd year till their 10th semester.

2. Completion Criteria

To earn a Minor:

- Students must complete 30 credits of approved courses within the minimum time limit of their degree program.
- Students need to complete five courses of 6 credits each under the specific Minor discipline.
- If a student is unable to complete the required 30 credits, the Minor will not be awarded.

However, the individual courses completed will still reflect in the student's transcript.

The Minor credential will be mentioned in the degree certificate as:

"Bachelor of Technology in Chemical Engineering with Minor in [Minor Discipline]."

It will also be reflected in the transcript, along with the list of courses taken.

3. Selection Criteria

- Students must pre-register for Minor courses. Allocation is done based on CPI (Cumulative Performance Index), subject to:
 - Course prerequisites
 - Seat availability
- Note: CPI for Minor courses is independent of the CPI for Major courses. This means the performance in Minor courses will not affect your Major CPI.

4. Minor Pre-Registration Process

The pre-registration process for Minor courses follows these steps :

- Course Selection:
 - You need to log into the External ASC portal to view the list of available Minor courses for the semester under Forms/Requests tab.
 - You can indicate your preferences for multiple courses.
 - You must check the pre-requisites of the course you are planning to pre-register.
- Course Allocation:
 - Allocation is done based on CPI and seat availability and you will be able to see your allocated minor course just before the actual registration on Internal ASC.
- Waitlist:
 - If a course is full, a waitlist is maintained in decreasing order of CPI and if a student drops an allotted Minor course, the first student on the waitlist will be registered.

For details of courses and feedbacks, you can refer to the [course info booklet](#) nicely compiled by the UGAC.

HONOURS

Honours is an additional optional academic credential or degree earned by completing **24 extra credits** in the student's **major discipline**. It signifies deeper expertise in the core area .

1. Eligibility and Completion Criteria

To earn an Honours:

- You must complete **24 credits** through **four courses** (each carrying 6 credits) before your final year.
- The courses include:
 - **2 compulsory core honours courses**: CL336 and CL325
 - **2 honours elective courses**: Chosen from the department's offerings.
- It is generally recommended to **start Honours courses in the 5th semester** to ensure timely completion, you can refer the recommended [ChE course plan](#) with honours.
- You need not register separately for honours, courses registration that you are planning to take as honours is also done along with other courses on Internal ASC.
- **Degree Certificate**: "Bachelor of Technology in Chemical Engineering, with Honours."
- **Transcript**: Along with the list of Honours courses completed.

2. Selection Criteria

- Departments set a **minimum CPI cut-off** for Honours course allocation.
- **Note**: The CPI for Honours courses is **independent** of the Major CPI. Performance in Honours courses will **not affect** your Major CPI.

3. Honours for Dual Degree (DD) Students

- **Dual Degree students** are compulsorily required to complete the Honours requirements as prescribed by the department.

The total of 387 credits are required for a Dual Degree student:

- **B.Tech.**: 267 credits
- **Honours**: 24 credits
- **Project**: 72 credits
- **Masters Courses**: 24 credits

SUMMARY OF COURSES AT IITB

Type	Meaning	CPI Impact
Core Courses	Mandatory courses for degree completion, can't be substituted	Count in CPI
Minor Courses	Optional 30 credits in a discipline other than major to get an extra degree.	Separate minor CPI
Honour Courses	Optional 24 credits (B.Tech) for specialisation in the same discipline to get an extra degree.	Separate honours CPI
Institute Electives (Old Terminology)	Courses from departments other than your own.	Count in CPI
HSS Electives (Old Terminology)	Humanities courses in the third year.	Count in CPI
STEM Electives (New Terminology)	Science, Technology, Engineering & Mathematics related courses which are mandatory to be done but are chosen based on interest.	Count in CPI
HASMED Electives (New Terminology)	Humanities, Arts, Sociology, Management, Entrepreneurship and Design related courses	Count in CPI
Flexible Electives (New Terminology)	All electives including STEM, HASMED and Department electives come under this superset.	Count in CPI
Department Electives	Advanced-level courses from your department.	Count in CPI
ALCs	Extra courses for learning.	Do not count in CPI
Audit Courses	Exposure to a course without grades.	Do not count in CPI
Sit-Through Courses	Permission to attend a course without registration or grades.	Do not count in CPI

COURSE REGISTRATION

1. Pre-Registration Phase:

- Duration: Typically conducted **one week** before registration opens. (**Refer Academic Calendar**)
- Scope:
 - **High-demand electives** (e.g., ENT electives) and **Minor Courses**.
 - **Some Department electives** (e.g., CL6001, CL 678 etc.), get the list from GSec.
 - Generally courses are allocated based on CPI or professors choice of students.
- Where to Pre-Register: On **External ASC under Forms/Requests**.
- Prerequisites:
 - **Semester fees** and at least the **first instalment of SMA** must be paid via **external ASC**.

2. Registration Phase:

- Duration: Conducted from end of December for even semester and end of July for odd semester for all courses.
- Portal: On **Internal ASC under Academics >> Registration >> Registration/Adjustments**.
- Steps:
 - Pre-registered courses (e.g., electives and minor courses) will be **preloaded**.
 - Additional courses (not part of pre-registration) as well as pre-reg courses with vacant seats will be available on a **First-Come-First-Serve (FCFS)** basis.
- Key Notes:
 - Registration Deadline: You must submit the course registration form before the final date (see academic calendar) to confirm registration. A **confirmation email** will be sent upon successful submission. Failure to submit the registration form may result in missing registration.

3. Adjustment Phase:

- Duration: Runs for approximately **10 days** post the registration phase.
 - You can **add/remove/change course tags** (in limited cases).
 - Adjustments can be made **multiple times**, but submitting the updated course registration form is required.

5. Course Withdrawal Phase (Without 'W' Grade):

- Duration: Opens **2 weeks** after the course instruction begins phase ends.
- Scope:
 - Students can **withdraw courses but cannot add new ones**.
 - Courses withdrawn during this phase will not carry a 'W' grade and won't show up on the transcript.

General Instructions for Students:

- **Pre-Registration:** There is **no need to rush** for pre-registration since all pre-registered courses will remain available until the deadline.
- **Registration:** Be **prompt** while registering for courses during the registration phase, especially for **FCFS courses**.
- **Confirmation:** Ensure you submit the registration form at least once before the registration deadline to finalize your course selections.
- **Compliance:** Pay semester fees and first SMA instalments before the specified deadline..

COURSE TAGS

Courses offered by the institute, such as Minors, Electives, ALCS, and others, are assigned specific tags to indicate their designation on the transcript. These tags help in categorizing courses based on their type and role in the curriculum.

TYPES OF TAGS

THE FOLLOWING CODES ARE USED TO DENOTE DIFFERENT TYPES OF COURSES:

- **C:** CORE COURSES
- **I:** INSTITUTE ELECTIVES
- **D:** DEPARTMENT ELECTIVES
- **M:** MINOR COURSES
- **O:** HONOURS COURSES
- **H:** HUMANITIES ELECTIVES
- **T:** ADDITIONAL LEARNING COURSES (ALC)

For instance, Minor courses are assigned the tag **M**, while Honours courses are tagged as **O**. This tagging system ensures consistency and clarity in course categorization across academic records.

Note: No, special tag has been given for STEM or HASMED electives till now !

RETAGGING

- Each course is initially tagged by the student during registration. Students are provided with two opportunities to modify these tags:
- **First Re-Tagging:** This can be done during the second-to-last semester.
- **Second Re-Tagging:** This can be done during the final semester.
- It is important to note that a course that has been re-tagged during the first opportunity cannot be re-tagged again during the second. Additionally, core courses cannot be re-tagged under any circumstances.

TAG CODE	TAG DESCRIPTION	CHANGEABLE INTO
C	Core Course	Not Changeable
I	Institute Elective	T
D	Department Elective	O, T
M	Minor Course	I, T
O	Honor Course	D, T
H	Humanities Elective	T
T	ALC	D, I, O

DUAL DEGREE CONVERSION

ELIGIBILITY AND REGISTRATION

- Students interested in the Dual Degree program must register for and complete the additional Honours courses.
- Application for conversion is allowed only at the end of the **7th semester** typically in 2nd week of November.

APPLICATION PROCESS

- Submit the application via a reply to the mail of DD conversion sent by DD coordinator (currently Prof Jhumpa Adhikari: adhikari@iitb.ac.in)
- Some applications may include recommendations and may be discussed in the DUGC (Department Undergraduate Committee) as part of the evaluation process.

CPI CRITERIA FOR CONVERSION

- **DIRECT CONVERSION:**
 - Students with a **CPI ≥ 7** with no backlogs are eligible for direct conversion.
- **SPECIAL CASE CONVERSION:**
 - Students with a **CPI < 7** with no backlogs, who have completed three Honours courses, may apply for conversion.
 - A faculty member who has taught or supervised a project conducted by the student must provide a recommendation.
 - The final decision is made by the DUGC.
- Detailed course plan: [Click Here!](#)

JOINT MASTERS

- Eligibility
 - Open to BTech undergraduate students chemical students.
 - A **CPI ≥ 7** is required to apply.
- Funding and Financial Support
 - Selected students will receive **full financial support** covering both stipend and tuition fees for the Master's degree after completing the BTech degree.
- Program Structure
 - Duration and Stipends:
 - First 7 months: Stay at the University in St. Louis with stipend (**2500 \$ Per month**).
 - Next 4 months: Stay at IIT Bombay with an IITB stipend.
 - Credit Hours:
 - The program includes **30 credit** hours of study and research.
- Post-Master's Opportunities
 - Students have the option to apply for admission into an accelerated PhD program after completing the Joint Master's degree.
- **Three degrees** are awarded post completion of this: B.Tech & M.Tech from IITB and MSc from Washington University.

Further Informations : [SemEx & Joint Masters - Google Drive](#)

PROFESSORS INVOLVED:

INDIAN INSTITUTE OF TECHNOLOGY

1. Prof. Jhumpa Adhikari (IITB Program Coordinator ChemE) - Contact her for any query !
2. Prof. Srinidhi Balasubramanian
3. Prof. Indrajit Chakraborty
4. Prof. Abhishek Chakraborty
5. Prof. Ravindra Gudi
6. Prof. Harish Phuleria (IITB Program Coordinator ESED)
7. Prof. Venkatasailanathan Ramadesigan (IITB Program Coordinator DESE)
8. Prof. Manoranjan Sahu
9. Prof. Swatantra Pratap Singh
10. Prof. Bharatkumar Suthar

IDDDP (INTER-DISCIPLINARY DUAL DEGREE PROGRAM)

- Application Eligibility and Timeline
 - Students can apply for IDDDP (Integrated Dual Degree and Diploma Program) at the end of the 6th semester.
 - Applications are submitted via External ASC under the Forms and Requests section.
- Semester Plan Submission
 - Applicants must submit a detailed semester plan as part of the application process.
- CPI Criteria for Entry: No Active Backlogs
 - Direct Entry to M.Tech:
 - If $CPI \geq 7$, direct entry to M.Tech is allowed.
 - Special Case Entry:
 - If $CPI < 7$, entry is generally not permitted.
 - In special cases, an LoR (Letter of Recommendation) is required to support the application.
- Approval Process
 - The application is reviewed and approved in the following sequence:
 - FACADS: Faculty Advisors approve the IDDDP application via External ASC.
 - Home Branch DUGC: The application is then discussed in the applicant's home department DUGC (Department Undergraduate Council).
 - Second Department DUGC: Finally, the application proceeds to the second department's DUGC for review and approval.

APPLICATION PROCESS : [IDDDP.pdf](#)

Typical **IDDDP TIMELINE for an YEAR(2023)** : Opening of online application form for students to apply -> 24 May 2023 to 5 June 2023 Online recommendations by Faculty Advisor of 'Home' department -> 26 May 2023 to 12 June 2023 Online approval/rejection of the applications by Convener of DUGC of "Home" Department -> 26 May 2023 to 14 June 2023 Approval/ rejection of the applications by Convener of DUGC/DPGC "Host" Department -> 15 June 2023 to 26 June 2023 Decision on applications by Convener, UGAPEC -> 10 July 2023

SEMESTER EXCHANGE PROGRAM

ELIGIBILITY AND COURSE MATCHING

- Students can opt for courses in foreign universities that match the courses offered at IIT Bombay.

APPLICATION TIMELINE

- Each semester, the Dean IR Office, IITB publishes a [list](#) of MoU signatories
- For the Spring Semester, the list is floated in August.

FINANCIAL RESPONSIBILITY

- Students are responsible for managing their own finances for the exchange program.

COURSE MAPPING AND SEMESTER PLANNING

- Students must plan their semester and map courses in consultation with their Faculty Advisor.
- Refer to the [application template](#) for details

ALTERNATIVE COURSE OPTIONS

- If certain courses cannot be mapped, students may substitute them with NPTEL courses.

GRADING AND TRANSCRIPTS

- SemEx grades:
 - Are not included in total CPI calculation but are considered for grade completion.
- Foreign grades:
 - Are displayed on the transcript as they are, without conversion.

DECLARATION FORM

- Students must sign and submit the declaration form to the Dean IR Office.

Form Link: [SemEx Declaration form.pdf - Google Drive](#)



PROJECTS IN CHEMICAL ENGG.

The Chemical Engineering Department offers **three** types of projects during the semester:

1. **SLP**: Supervised Learning Project - A credited research project directly done under a professor on individual basis.
2. **SLP-IDP**: Supervised Learning Project in Industrially Defined Problems - A credited industrial research project done in a group of three students under professor/s and an industry mentor as guide.
3. **BTP**: B.Tech. Project - A credited research project directly done under a professor on individual basis. B.Tech thesis submission is required.

Each of these projects is worth 6 credits and are optional. Only one project is allowed per sem. A student is allowed to take a maximum of two SLP/SLP-IDPs in total. Students cannot take two projects in two consecutive odd semesters or two consecutive even semesters.

1. Course Codes

- **SLP/SLP-IDP**:
 - **CL443** for Odd Semester
 - **CL445** for Even Semester
- **BTP**:
 - **CL495** for Odd Semester
 - **CL494** for Even Semester

2. Eligibility

- **SLP**:
 - Open to all 4th-year students and Category 1 students of 3rd-year.
- **SLP - IDP**:
 - Open to all 4th-year students and all 3rd-year students not necessarily in category 1.
 - CPI based selections are done.
- **BTP**:
 - Open to final-year students only.

3. Registration Process

- **SLP**:
 - Project topics are floated to students **via email** (Prof Picardo) typically **2 weeks** before registration.
 - You need to register **CL 443/445** on **Internal ASC** like other courses during the registration period.
 - The **SLP registration form** must be filled out and submitted to the department office within **2 weeks** of the start of the semester. Form Link: [SLP Form](#)
- **BTP**:
 - Project topics are floated to students **via email** (Prof Gundabala) to Final year students before the commencement of the **7th and 8th semesters**.
 - You must register using the course codes **CL494/495** for the respective semester like other courses during registration period. Just like SLP, you need to submit [BTP form](#).
- **SLP-IDP**:
 - You need to register **CL 443/445** on **Internal ASC** like other courses during registration period.
 - The SLP-IDP Pre-registration **google form** must be filled out which is typically floated by the GSec on mail around **3 weeks** before the registration.

TAGGING RULES FOR PROJECTS

1. Regular SLP and BTP can **always** be tagged as **Additional Learning Courses (T)**
2. Regular SLP can be tagged as **honors elective (O)** without any approval.
3. BTP **CANNOT** be tagged as honors elective (O).
4. Both Regular SLP and BTP can be tagged as Department Electives (D) only if a written statement approved by the guide is submitted after the completion of the project, testifying that the project is done with sufficient consistency and rigor. It is suggested that Regular SLP/ BTP be registered as an Additional Learning Course (T) initially. It can be retagged later with **post-facto approval** of the guide.
5. **SLP-IDP** can be tagged as Department Elective (D), Honors Elective (O) OR Additional Learning Course (T)
6. A **maximum of 3 out of 5** department electives can be BTP/ SLP/ SLP IDP.

EVALUATION OF PROJECTS

- **SLP:**
 - The student is to be examined at the end of the semester by a **panel** consisting of the **supervisor and at least one examiner** (another faculty member of our institute) based on the report and presentation. An overall grade is recommended in the SLP evaluation form.
- **SLP - IDP:**
 - The teams would be evaluated based on **weekly presentations** and comprehensive **mid-semester and end-semester presentations** in presence of the instructor(s), faculty mentor and the industry mentor.
 - A significant amount of weightage is reserved for the submission of **mid-semester and end-semester reports**.
- **BTP:**
 - The student is to be examined at the end of the semester by a **panel** consisting of the **supervisor and at least one examiner** (another faculty member of our institute) based on the report and presentation. An overall grade is recommended in the BTP evaluation form.

PUNISHMENTS

ACADEMIC AND EXAMINATION RULES AND ASSOCIATED PENALTIES

- **Categories of Decision Authorities**
 - D-ADAC or DUGC: Departmental Academic Disciplinary Action Committee (for minor or department-level issues like FR or DX).
 - ADAC: Academic Disciplinary Action Committee (handles repeated or severe violations).
- **Rules for Proxy Attendance**
 - A student whose proxy attendance has been marked will not be given a DX, However, the student who marked the proxy if caught will receive a DX as punishment.
- **Leaving After Marking Attendance**
 - If a student marks their attendance and then leaves:
 - First Violation: Warning.
 - Second Violation: FR (Fail in the course).
- **Impersonation in Exams**
 - The impersonating student will face semester suspension.
- **Submission of False Pink Slips (Falsification of Data)**
 - Submitting a falsified pink slip (e.g., altered data or forged details):
 - Penalty: Suspension for a year.
- **Copying in Assignments or Labs**
 - If students copy in a home assignment or lab work:
 - Penalty:
 - Zero marks for the particular assignment.
 - 1-grade penalty for both the student who copied and the one who allowed copying.
- **Rules During Examinations (Be it Midsem/Endsem or even Quizzes)**
 - Verbal Communication:
 - 1-grade penalty if evidence of communication is found.
 - If similar answers or identical mistakes or any other solid proofs are detected, FR will be assigned to both students.
 - Use of Chits, Phones, or Other Aids:
 - Penalty: FR in the course.
 - If you are found carrying a mobile phone but not using it then a grade penalty is awarded. However, this liberty given only for mobile phones, not for other unauthorized materials.
- **Repeated Violations**
 - All punishment decisions for repeated violations are escalated to ADAC (higher-level committee).
 - The ADAC has the authority to impose stricter punishments as seems necessary.
- **Scribbling on ones Hands or any other body parts:**
 - Punishment is an FR, even if the scribbled content is not related to the exam. So, make sure that you check your hands before entering the exam hall.

SCHOLARSHIPS AT IIT BOMBAY

Financial Support Opportunities for Students

Mail id for ug scholarship - ugscholarships@iitb.ac.in

TIMELINE

- Applications Open: Odd Semester (July - November)
- Fee Reimbursement: Processed during the Odd Semester
- Even Semester Fees: Payment not required if scholarship is approved

DOCUMENTS REQUIRED

Generally Previous year academic records, Income certificate, Caste Certificate , Bonafide certificate (for private scholarships).

APPLICATION PORTAL

- **INTERNAL ASC:**
 - Portal for applying to MCM, Named Scholarships, Free Messing Scholarships, and Fee Remission

Internal ASC (<https://asc.iitb.ac.in/acadmenu/>) Academic Academic/Personal Details
Update/Apply for Scholarship

- **NSP (NATIONAL SCHOLARSHIP PORTAL):**
 - For National-level scholarships, primarily for SC/ST students

Apply from here <https://scholarships.gov.in/>

Verification of documents will done by both IITB Scholarship unit and their state nodal officer

Note:- you must have to submit physical copy of all documents in ug scholarship section.

TYPES OF SCHOLARSHIPS

1. MERIT-CUM-MEANS (MCM) SCHOLARSHIP

Merit Criterion: For first-year B.Tech., Dual Degree, and B.S. students, JEE (Advanced) AIR or UCEED Rank applies, while subsequent years rely on the prior year's academic performance.

Income Limit and Benefits for UG Students

- Up to ₹1 Lakh
 - Women: Tuition fee exemption, ₹40,000/year scholarship, ₹10,000/year Women Merit Scholarship.
 - Others: Tuition fee exemption, ₹40,000/year scholarship.
- Above ₹1 Lakh up to ₹3 Lakhs
 - Women: Tuition fee exemption, ₹30,000/year scholarship, ₹10,000/year Women Merit Scholarship.
 - Others: Tuition fee exemption, ₹30,000/year scholarship.
- Above ₹3 Lakhs up to ₹5 Lakhs
 - Women: Tuition fee exemption, ₹20,000/year scholarship, ₹10,000/year Women Merit Scholarship.
 - Others: Tuition fee exemption, ₹20,000/year scholarship.

Link : https://www.iitb.ac.in/newacadhome/MCM_UG.pdf

2. FACILITIES OF FREE MESSING (FOR SC/ ST CATEGORY STUDENTS)

All SC/ST UG students are exempted from tuition fees, get free messing (basic menu), pocket allowance of ₹500/month (10 months/year), and hostel room rent waiver; women also receive an additional ₹10,000 Merit Scholarship.

Link : https://www.iitb.ac.in/newacadhome/Free_Messing_UG.pdf

3. REMISSION OF FEES

Eligibility: Applicable to B.Tech, Dual Degree, B.S., and B.Des. students with gross parental income \leq ₹5,00,000 per year (no deductions).

Benefits:

- Income $<$ ₹1 Lakh: Full tuition fee remission.
- Income ₹1–5 Lakhs: 2/3rd tuition fee remission.

Documents: Submit a Parental Income Certificate from the previous financial year annual.

Link : https://www.iitb.ac.in/newacadhome/Remission_Fees_UG.pdf

4. NAMED SCHOLARSHIPS

Managed by the Office of the Dean, Alumni & Corporate Relations, these scholarships are awarded based on JEE (Advanced)/UCEED rank in the first year and academic performance in subsequent years.

Link : https://www.iitb.ac.in/newacadhome/Named_Scholarship_UG.pdf

5. NSP SCHOLARSHIP

Offered through the National Scholarship Portal, this scholarship supports students based on eligibility criteria like income, merit, and category.

Useful links :

https://www.iitb.ac.in/newacadhome/FAQ_Scholarship.pdf

CERTIFICATES

BONAFIDE CERTIFICATE

- To certify that you are associated with IITB as students/instructors/staffs
- Application issued by registrar , it usually takes 1-2 days.

Procedure to apply : There will be a form in the Acad office (Main building , 2nd Floor) UG section . Just fill the form and Submit it

Bonafide Sample - [Bonafide Certificate Form](#)

TRANSCRIPT

A transcript is an official record of a student's academic performance, including courses taken and grades received.

Transcript Request

- Fees:
 - ₹200 for current students
 - ₹500 for alumni
 - ₹1000 for older alumni (hard copy)
 - ₹1000 for electronic copy

Procedure to apply :

Fill the form from acad office(Main building, 2nd floor) go to transcript section they will give you draft for payment after that you have to pay it in cash section either via cash/ UPI and again submit the receipt back to transcript office

Transcript – [Transcript Application](#)

NO-OBJECTION CERTIFICATE

No-Objection Certificate :

The No Objection Certificate (NOC), issued by the Dean of Academic Programs, is required by companies before offering a letter to confirm the student is not involved in any malpractices.

Apply from dean AP office

Or

you can contact academic superintendent (Sudhir Dhoble) as well for this

His email id - sudhirdhoble@iitb.ac.in

Sample - [NOC Form](#)

CONVERSION CERTIFICATE (PROOF OF CONVERSION FROM CPI TO %)

Your academic performance in percentage is often required for jobs or higher studies. In such cases, converting CGPA to percentage needs proof, usually provided as an official document from your institute. This ensures accuracy and prevents discrepancies.

There is no provision to issue personalized certificate for grade conversion.

However, there is common certificate for this purpose.

[Certificate_cpi_to_percentage](#)

PROVISIONAL DEGREE

Note: This certificate is a temporary document indicating you're not yet a B.Tech graduate but is required by companies for placement purposes.

PROVISIONAL DEGREE PROCESS

To obtain a provisional degree, follow these steps:

1. Complete graduation requirements via External ASC.
2. Submit the Convocation Form (convocation fees must be paid before submitting).
3. Ensure tags are frozen and graduation status is updated.
4. Once the status is confirmed, you can apply for the provisional certificate.

DUES

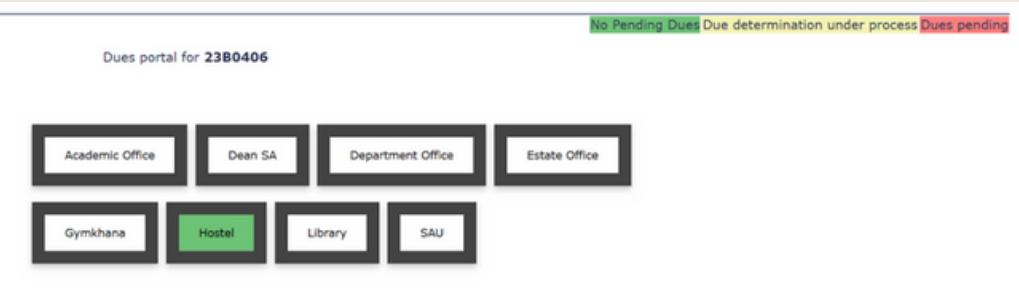
DUES CLEARANCE

To clear dues, follow these steps:

1. Complete payment through External ASC.
2. Check the no-dues status.
3. There are 8 types of dues:
 - Dean SA, Hostel, Department Office, Academic Office, SAU, Gymkhana, Library, Estate Office.
 - Ensure all dues are settled at least 1 week before the convocation.

Check through external ASC Payment Check No Dues Status

Ask them to update this ASAP otherwise they will update it on very last dates before deadline



ROOM RETENTION

ROOM RETENTION PROCESS:

- Submit an application to the Dean of Student Affairs (Dean SA) with a valid reason.
- If professors are involved, both you and the professor must sign the application.
- The application should mention, "The hostel fees for this duration will be paid by students/professors."

After getting signed from dean SA , submit it to HCU office (Main building, -1 floor)

- The HCU office will email your status to the hostels.
Hostel fees is Rs. 3400/month



SLP

A semester-long supervised project involving computational, experimental, or learning-based topics proposed by faculty.

ALLOTMENT PROCESS:

1. Eligibility:

- Open to third-year B.Tech students (CPI > 8.0) and fourth-year B.Tech/DD students.
- Students cannot register for both SLP and BTP in the same semester.

2. Topic Proposal:

- Faculty propose topics in the preceding semester by a specific deadline.
- Each topic must include:
 - Defined scope of work.
 - Method of evaluation.

3. Approval:

- Topics must be approved by DUGC before circulation.

4. Selection:

- Students meet faculty members to finalize topics based on mutual agreement.
- Faculty can choose to supervise a student or decline, with a limit of two students per faculty member.

5. Registration:

- Students submit a signed form (student and faculty) in the prescribed format to the Head's office before the deadline.

6. Finality of Decision:

- Faculty decision regarding supervision is final.

EXAMINATION:

- At semester-end, students are evaluated by a panel comprising:
 - The supervisor.
 - At least one examiner (another institute faculty member).
- Evaluation is based on:
 - Report.
 - Presentation.
- An overall grade is recommended.

Form - [SLP_Form](#)

SLP-IDP

SLP IDP involves semester-long projects provided by industries, focusing on solving commercial-scale problem statements.

ALLOTMENT PROCESS:

1. Eligibility:

- Open to third-year B.Tech, fourth-year B.Tech, and post-graduate students.
- Students must register for either:
 - CL 443: Supervised Learning I (Autumn semester) or
 - CL 445: Supervised Learning II (Spring semester) to enroll in SLP IDP.

2. CPI Cutoff:

- The cutoff varies each semester depending on the number of shortlisted problem statements and student intake requirements.

3. Team Formation:

- Instructors decide the number of participants per project; typically, three students per problem statement form a team.

4. Allotment Criteria:

- Problem statements are allocated by instructors based on:
 - The knowledge and skills of participating teams.
 - The difficulty of the problem statement.

5. Confidentiality Requirement:

- Students must sign Non-Disclosure Agreements (NDAs) with the industries before commencing work.

6. Final Decision:

- Faculty decisions on team composition and project allotments are final.

7. Presentation Requirements:

- Teams must deliver:
 - Weekly presentations.
 - Comprehensive mid-semester and end-semester presentations.
- Presentations will be conducted in the presence of:
 - Instructor(s).
 - Faculty mentor.
 - Industry mentor.

8. Report Submission:

- Significant weightage is assigned to mid-semester and end-semester reports, which should detail the progress and outcomes.

9. Participation:

- Weekly participation in discussions is mandatory, and evaluation includes:
 - Timely attendance at weekly meetings.
 - Active involvement during discussions.

10. Grading Policy:

- Higher weightage is given to mid-semester and end-semester presentations compared to weekly presentations.
- The exact grading policy is at the discretion of the instructors.

ID CARD RE-ISSUE PROCESS

To apply for an ID card, follow these steps:

1. Visit the ID card office.
2. Collect the application form.
3. Fill out the form accurately and submit it.
4. Pay the required ID card fee of **300 INR** at the office.
5. Collect the payment receipt for your records.

The process typically takes up to one week to complete

Credit Extension Application

Category I students should submit detailed applications in the first request. Note that credit extension is generally not approved by the Dean of Academic Programs unless a valid reason is provided.

Fee Payment

Fee payment is mandatory for registration in the next semester; failure to pay will result in ineligibility for registration.

Fee Payment Process :

Pay directly through External ASC Payment Section via UPI or SBI Payment Gateway.
After paying the academic fees, you will be able to see the mess fees payment link there.

Through Bank Loan/Scholarships : Go to External ASC Bank Loan/NEFT Fee Payment, generate a demand draft, and submit the transaction ID on the sample form after payment. Note that the generated demand draft is valid for 10 days. Note: It is advised to complete payments through loans at least 15 days before the deadline.