

UNDERGRADUATE PROGRAMMES

B. Tech.

B. Tech. – M. Tech. (Dual Degree)

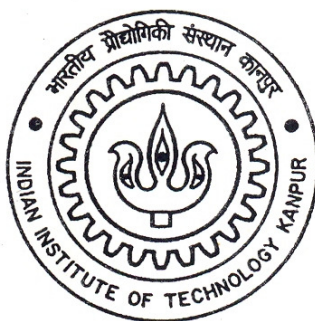
M. Sc. (Integrated)

M. Sc. (Two-year)

M. Sc. – Ph. D. (Dual Degree)

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Procedures & Requirements



भारतीय प्रौद्योगिकी संस्थान कानपुर
INDIAN INSTITUTE OF TECHNOLOGY KANPUR

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1. INTRODUCTION

The objectives of the undergraduate programmes are

- *to provide the highest level of education in technology and science and to produce competent, creative and imaginative engineers and scientists,*
- *to promote a spirit of free and objective enquiry in different fields of knowledge,*
- *to make a significant contribution towards the development of skilled technical manpower, and*
- *to create an intellectual reservoir to meet the growing demands of the nation.*

The undergraduate programmes are designed to achieve these objectives and to inculcate in the student concepts and intellectual skills, courage and integrity, awareness of and sensitivity to the needs and aspirations of the society.

This manual sets out the procedures and requirements of the undergraduate programmes of study that fall under the purview of the Senate Under-Graduate Committee.

1.1 Undergraduate Programmes

a) **Bachelor of Technology (B.Tech.)** 4-year programmes in:

- i) Aerospace Engineering
- ii) Biological Sciences and Bio-Engineering
- iii) Chemical Engineering
- iv) Civil Engineering
- v) Computer Science and Engineering
- vi) Electrical Engineering
- vii) Materials and Metallurgical Engineering, and
- viii) Mechanical Engineering.

b) **Bachelor of Technology–Master of Technology (B. Tech.-M.Tech.)*** 5 year dual degree programmes in:

- i) Aerospace Engineering
- ii) Chemical Engineering
- iii) Civil Engineering
- iv) Computer Science and Engineering
- v) Electrical Engineering, and
- vi) Mechanical Engineering.

c) **Master of Science (M.Sc.) (Integrated)** 5-year programmes in:

- i) Chemistry
- ii) Economics
- iii) Mathematics and Scientific Computing, and
- iv) Physics.

d) **Master of Science (M. Sc.)** 2-year programmes in:

- i) Chemistry
- ii) Mathematics

* governed by rules, procedures and requirements of Undergraduate Programmes up to three and half years (i.e., seven semesters) of course curriculum. The subsequent part of the curriculum comes under the purview of the Postgraduate Programmes and treated with their rules, procedures and requirements.

- iii) Physics, and
- iv) Statistics.

- e) **Master of Science – Doctor of Philosophy (M.Sc. – Ph.D.)⁺**
dual degree programme in:
 - i) Physics.

1.2

Senate Under-Graduate Committee (SUGC)

The **Senate Undergraduate Committee** is a standing committee of Academic Senate. Senate manual prescribes the constitution of SUGC, and also the process of election of its Chairman. The Chairman of the SUGC convenes and presides over the meetings.

The SUGC has jurisdiction in the following matters concerning the undergraduate programmes of the institute:

- *formal approval of new courses of instruction,*
- *desirable modifications of courses already approved,*
- *credit valuation of courses,*
- *formal approval of the admission of first year students and others with advance standing,*
- *granting of degrees,*
- *conduct of examinations,*
- *evaluation of academic performance, and*
- *such other related matters as may be referred to it by the Senate.*

Functions of the SUGC consist primarily of general policy determination, coordination and review, but, the Senate retains the power of final review and decides such matters as may be brought in appeal before it. In discharging its responsibilities, the SUGC shall make full use of the appraisals and recommendations of the various academic departments concerned.

The SUGC has two standing sub-committees, namely **Core Curriculum Committee (CCC)** and **Academic Performance Evaluation Committee (APEC)**, and is assisted by the Departmental Under-Graduate Committees (DUGCs). The Chairman of SUGC nominates the Chairmen of both CCC and APEC. These Chairmen, in consultation with the SUGC Chairman, form their respective committees consisting of five faculty members drawn from amongst the SUGC members. The CCC oversees the core curriculum, coordinates its various facets and performs all other relevant functions. The APEC evaluates the academic performance of the undergraduate students to make recommendations regarding (i) their further programme of studies and (ii) action to be taken in the case of deficient students. *Both these committees make their recommendations to the SUGC.*

The **Department Under-Graduate Committee (DUGC)** consists of a

⁺ governed, by rules procedures and requirements of Undergraduate Programmes up to one and half years (i.e., three semesters) of course curriculum. The subsequent part of the curriculum comes under the purview of the Postgraduate Programmes and is treated with their rules, procedures and requirements

Convenor (nominated by the Head of the Department in consultation with the faculty of the Department), the Head of the Department, a minimum of four (4) and a maximum of eight (8) faculty members, and two student representatives (chosen by undergraduate students of the Department) for a one-year period. The tenure of the faculty members shall be two years, half of them retiring each year. In the first year, lots will be drawn to decide on the retiring members. The Department Undergraduate Committee (DUGC) advises the students in their academic programmes and makes recommendations to the SUGC in all academic matters.

1.3 Office of the Dean of Academic Affairs

The office of the Dean of Academic Affairs (DOAA), called the Academic Section, is responsible for the implementation of the decisions taken on academic matters by the Senate and the SUGC. It (i) receives, processes and maintains all records relating to the undergraduate programmes including curricula, courses offered, academic calendar, registration, leave, examinations, grades and award of degrees and prizes, (ii) disseminates information pertaining to all academic matters, (iii) issues necessary memoranda/orders, (iv) acts as a channel of communication between the students, instructors, departments/ interdisciplinary programmes and SUGC. The under-graduate (UG) office of the Academic Section assists the SUGC and its subcommittees in their tasks.

1.4 Waiver Clause

The procedures and requirements set out in this manual, other than those in Sections 3, 6.3, 7, 9, and 10 may be waived in special circumstances by the SUGC. All such exceptions are, however, reported to the Senate.

2. ACADEMIC SESSION

The academic session normally begins in the fourth week of July every year and ends in the middle of July. It is divided into three parts:

Semester I: From the fourth week of July to the last week of November

Semester II: From the last week of December to the last week of April

Summer Term: From the middle of May to the middle of July

Each of the two semesters consists of about eighteen (18) weeks with one week of mid-semester recess. The last 10 days of each semester are used for the end-semester examination and one week period during the semester is utilized for the two mid-semester examinations. The first day of the end-semester examination and the first day of the classes in a regular semester should normally be on a Monday. Thus, there are 14-15 working weeks in each semester. The summer term consists of about eight (8) working weeks, excluding the four days

taken up by the two mid-term and one end-term examinations.

2.1 Academic Calendar

The exact dates of all important events, such as orientation, registration, late registration, commencement of classes, adding and dropping of courses, submission of documents, examinations, submission of grades, conversion of I-grades, vacation, mid-semester recess, etc., during the Academic Session are specified in the *Academic Calendar* of the Institute, approved by the Senate (Appendix 1).

3. ADMISSIONS

3.1 BTech, BTech–MTech (Dual degree) and MSc (Int.) Programmes

a) **Through Joint Entrance Examination** - Admissions to the B.Tech., B.Tech.- M.Tech. (Dual degree) and M.Sc. (Integrated) programmes are made once a year in July through Joint Entrance Examination (JEE) conducted on an All India level by IITs. The procedures and other requirements for admission are specified in the JEE Information Brochure brought out every year.

b) A few admissions are offered under the Cultural Exchange Fellowship Programme of the Government of India, administered by Indian Council of Cultural Relations (ICCR), New Delhi. For these fellowships, the candidates are required to apply through the Indian High Commission/Embassy in their respective countries.

c) **Reservations of Seats and Admission for reserved seats**

Reservation of seats for the various categories shall be as prescribed by the Board of governors and the current status for the reserved seats is given in Annexure-5. The admission process for the reserved seats is as stated below:

- i) **SC and ST Candidates** – Reserved seats are filled on the basis of JEE qualifying norms specified for them. In case these reserved seats remain vacant, other SC and ST candidates (who appeared in JEE and satisfy certain relaxed conditions) are offered admission to the Preparatory Course of one year duration in Physics, Chemistry, Mathematics and English. On completion of the preparatory course and passing of the examination conducted by the Institute, the candidates are offered admission to the first year of B.Tech./B.Tech.-M.Tech.(Dual-degree)/M.Sc. (Int.) programmes against the vacant reserved seats of the year of their appearance in JEE.
- ii) **Other Backward Classes (OBC) Candidates (Not belonging to creamy layer)**
Reserved seats are filled on the basis of JEE qualifying norms specified for them.
- iii) **PD Candidates**
Reserved seats are filled on the basis of JEE qualifying norms specified for them. In case these reserved seats remain vacant, other candidates in their respective categories are offered admission.

d) **Admission with Advanced Standing** – Normally, admissions are made to the first year of the B.Tech., B.Tech.-M.Tech. (Dual degree) and M.Sc. (Int.) programmes. However, under exceptional circumstances, the Senate may admit a student with advanced standing (upto a maximum of four semesters) on the basis of his/her partial completion of a similar programme elsewhere.

e) **Change of Programme** - The students shall normally pursue the respective B.Tech. / B.Tech.-M.Tech. (Dual degree) / M.Sc. (Int.) programmes allocated to them at the time of admission. However, the Senate may permit a limited number of students to change their programme as per the approved guidelines

(Annexure 1).

3.2 M.Sc. (2 year) and M.Sc.-Ph.D. (Dual degree) Programmes

a) **Through Joint Admission Test for MSc** - Admissions to the M.Sc. (2 year) programmes and M.Sc.-Ph.D. (Dual degree) are made once a year in July through Joint Admission Test for MSc (JAM) conducted on an All India level by IITs. The minimum academic qualification for admission is a B.Sc. degree (or equivalent) from a recognized university. The procedures and other requirements for admission are specified in the JAM

Information Brochure brought out every year.

b) Reservations of Seats and Admission for reserved seats

Reservation of seats for the various categories shall be as prescribed by the Board of governors and the current status for the reserved seats is given in Annexure-5. The admission process for the reserved seats is as stated below:

i) **SC and ST Candidates –**

Reserved seats are filled on the basis of JAM qualifying norms specified for them.

ii) **Other Backward Classes (OBC) Candidates (Not belonging to creamy layer)**

Reserved seats are filled on the basis of JEE qualifying norms specified for them.

iii) **PD Candidates**

Reserved seats are filled on the basis of JEE qualifying norms specified for them. In case these reserved seats remain vacant, other candidates in their respective categories are offered admission.

3.3 Admission of Non-degree Students

A non-degree student is a student who is registered for a degree in a recognized Institute or a University in India or abroad, and who is officially sponsored by that Institute or University to complete a part of his/her academic programme at the Institute. For that purpose, the non-degree student may carry out research or take courses for credit or otherwise or may use other academic facilities. An official transcript of work done at the Institute along with grades obtained, if any, would be given to the non-degree student concerned for his/her use as s/he may deem appropriate. However, any credits earned at the Institute, by a non-degree student, cannot be

applied for any degree programme of IIT Kanpur at any time.

A person will be admitted as a non-degree student on a duly sponsored application to the Dean of Academic Affairs who will recommend admission on the advice of DUGC and SUGC to the Chairman, Senate for approval. A non-degree student may be admitted for a maximum period of one year only. The strength of non-degree students in any programme should not be more than 5% of the programme strength.

A non-degree student will be required to pay all applicable fees depending upon the status, programme, and nationality. Students so admitted will be governed by all rules, regulations and discipline of the Institute.

3.4 Cancellation of Admission

All students admitted provisionally or otherwise to any programme shall submit copies of their marksheets, provisional certificates, etc. of the qualifying examination and other documents by the last date specified for the purpose in the Academic Calendar. The Senate can cancel the admission of any student who fails to submit the prescribed documents by the specified date or to meet other stipulated requirement(s). The Senate may also cancel the admission at any later time if it is found that the student had supplied some false information or suppressed relevant information while seeking admission.

3.5 Fulfillment of Admission Requirements

Admission to any undergraduate programme requires that the applicant

- a) *be eligible,*
- b) *go through the laid-down admission procedure, and*
- c) *pay the prescribed fees.*

All admissions to the undergraduate programmes should be formally approved by the SUGC.

4. CURRICULUM

Details of the curriculum for the undergraduate programmes are contained in the “**COURSES OF STUDY**” bulletin, published periodically by the Institute.

4.1 BTech, BTech-MTech (Dual degree) and MSc (Int.) Programmes

These are divided into two distinct but compatible parts called Core Curriculum and Professional Curriculum. Each student is required to go through the Core Curriculum, irrespective of his/her chosen branch of specialization. It consists of a package of compulsory courses in Physics, Chemistry, Mathematics, Computing, Electronics, Engineering Graphics,

and Manufacturing Processes, besides a few elective courses from Engineering Science (as recommended by the department) and Humanities and Social Sciences.

The Professional Curriculum is meant for the chosen branch of specialization. It consists of a set of compulsory courses, electives, and project work.

BTech-MTech (Dual degree) programmes, in addition, contain a number of postgraduate courses and thesis work.

All students admitted to the first year of the BTech, BTech-MTech (Dual degree) and MSc(Int.) programmes are required to take a diagnostic test in English. Based on their performance, they are advised to credit a course on English Language and Composition.

The structure of BTech, BTech-MTech (Dual degree) and MSc(Int.) programmes is given in Annexure 2.

- a) **Slow-paced Programme** - All candidates admitted to the first year of BTech, BTech-MTech (Dual degree) and MSc (Int.) programmes are required to take courses in Physics and Mathematics. Based on their performance in the first mid-semester examinations in Physics, Mathematics and English (if registered), they are advised to either continue with the regular course(s) or join the slow-paced course(s). Though the contents of such courses and the regular ones are exactly the same, but, these are taught at a slower pace and the contents are covered in two semesters instead of one semester.

Slow-paced courses can not be repeated. So, if a student gets an 'F' grade in a slow-paced course, he/she is required to credit the corresponding regular course.

4.2 M.Sc. (2 year) Programmes

These programmes require students to take a set of compulsory courses designed to lay a strong foundation in the discipline. In addition, a few elective courses are to be credited to develop and pursue an area of specialization. In some programmes, there is a project, while in other programmes, projects may be replaced by elective courses. In some programmes, seminars are also included in the curriculum. The structure of MSc (2 year) programmes is given in Annexure 2.

4.3 M.Sc.-Ph.D. (Dual degree) Programme

The students are required to take a set of compulsory courses designed to lay a strong foundation in the discipline. In addition, some elective courses are to be credited to develop and pursue an area of specialization. The students are initiated into research methodology quite early. The programme is aimed to provide young motivated individuals with a rigorous training, desired level of understanding and scientific maturity and a solid base at an early stage to

enable them to pursue a research career. The structure of M.Sc.-Ph.D. (Dual degree) programme is given in Annexure 2.

5. REGISTRATION

All students are required to register each semester for the courses to be pursued by them, as per the programme, on the dates specified in the Academic Calendar. A student must ensure that he/she has completed the pre-requisites, if any, for each course to be registered.

For students in the B.Tech., M.Sc. (Integrate), and B.Tech. – M.Tech. (Dual-degree) programs, the course structure are fully specified for the first four semesters. In the remaining semesters, only compulsory courses are specified. DUGC Conveners may require registration of elective credits in specific semesters. For students in the M.Sc. (2-year) and M.Sc. – Ph.D. (Dual-degree) programs, only compulsory courses are specified for each semester. Elective credits can be registered in any semester, in consultation with DUGC Convener.

All courses of core curriculum which happen to be pre-requisites for subsequent courses in the core and/or the professional curriculum are offered in both the regular semesters or in one regular semester and one summer term put together.

The sole responsibility for registration rests with the student concerned.

5.1 Registration Procedure

A list of courses to be offered during the semester is put up on the notice boards/ website and is made available to the Convener, DUGC.

SUGC nominates Registration Advisors from amongst the faculty to provide necessary information on the core-curriculum courses offered and changes, if any, during registration in each semester. Similarly, DUGC nominates Registration Advisors to advise students on registration for courses of the professional curriculum.

The registration procedure involves:

- a) *filling of the registration form mentioning the courses to be credited in the semester/summer term,*
- b) *payment of fees and clearance of outstanding dues (if any), and*
- c) *signing of the registration roll in the office of the Dean, Students Affairs.*

A student who awaits the final result of the qualifying examination is allowed to register provisionally on submission of a certificate from his/her last institution stating that he/she has appeared in the final examination (both theory and practical). The candidate is required to submit documents of having passed the qualifying examination by the last date given in the Academic Calendar to get his/her registration regularized.

5.2 Registration of a Deficient Student

A deficient student is one who either has not taken or has taken but failed in course(s) of previous semester(s). The deficiency may be due to poor grades, not registering course(s) for health or other reason(s), etc.

The programme of a deficient student must be framed by APEC/DUGC in such a manner that as many backlog courses as are available are included. Further, backlog courses must be arranged as far as possible in the sequence of their accumulation.

A deficient student may be advised not to register for the professional courses if any of the following holds:

- (i) His/her CPI is less than 5.0.
- (ii) He/she has a total backlog of more than five courses of the core-curriculum.

5.3 Late Registration

If for any compelling reason like illness, etc. a student is unable to register on the day of registration, he/she can register on the late registration day (i.e., after about a week from the beginning of the semester) specified in academic calendar on payment of the late registration fee. However, if a student seeks prior permission to register late on valid grounds, Chairman, SUGC may allow and exempt him/her from payment of late registration fee.

5.4 Adding and Dropping of Courses

A student may add or drop course(s) within two weeks of the beginning of the semester or the last date(s) specified in the Academic Calendar with the permission of the SUGC. For this, he/she must fill the appropriate form, get the endorsement of the Instructors-in-Charge and the Convener, DUGC and submit the form to the Undergraduate Office for approval.

A student may also drop course(s) till 15 days after the first mid-semester examination with the following conditions.

1. Course(s) with a total of at most 5 credits may be dropped after the normal last date for add/drop in the semester.
2. Dropping of course(s) should not result in a net registration of less than 12 credits.
3. The request to drop course(s) must be endorsed by the Instructors-in-Charge and the Convener, DUGC.

A student may be required to drop a course at any stage if it is found that he/she does not meet the pre-requisites of the course, or if there is a clash in the student's time table preventing him/her from attending the course, or if

he/she is found not entitled to register for that course for any other reason.

5.5 Academic Load

A student may normally register for a maximum of 24 credits in a semester as per the respective programme. Each course carries a weightage in terms of credits depending upon the number of contact hours (lectures and tutorials) and/or laboratory hours (see Annexure 3 for details). However, DUGC Conveners may specify a lower limit than 24 credits.

A student whose CPI is less than the graduation CPI of his/her programme can register for a maximum of 22 credits.

A student in a B.Tech. – M.Tech. (Dual-degree) program, who is registered for at least 8 credits of M.Tech. thesis, can register for a maximum of 16 credits.

A student may, however, be permitted by SUGC to take an overload to enrich his/her knowledge as per the approved guidelines (Annexure 4).

Similarly, SUGC may allow a student to take a reduced load. Also, a deficient student may be required to take a reduced load as per the provisions/recommendations of APEC/DUGC/SUGC/decisions of the Senate (see, e.g., Section 7).

5.6 Summer Term Registration

A list of courses to be offered in the Summer Term is brought out during the second semester, normally before March 15 every year.

Students register for these courses at the beginning of the Summer Term on the advice of the APEC and/or DUGC.

No student is allowed to register for more than 10 credits during the summer term.

In view of the short duration of the Summer Term, late registration and adding and dropping of courses are not permitted.

5.7 Cancellation of Registration

Absence for a period of four or more weeks during a semester shall result in automatic cancellation of the registration of a student from all the courses in that semester.

6. TEACHING AND EVALUATION

6.1 Teaching

- a) **Medium** - The medium of instruction is **ENGLISH**.
- b) **Approval of Courses** - Each course along with its weight in terms of credits is approved by SUGC as per the procedures laid down by the Senate (Annexure 3). Only approved courses may be offered during any semester/summer-term.
- c) **List of Courses** - The list of courses to be offered by a department/interdisciplinary programme is finalized before the beginning of the semester/ summer term by the concerned Head, taking into consideration all the requirements and the recommendations of the standing committees of the Senate.
- d) **Conduct of Courses** - Each course is conducted by the Instructor-in-charge with the assistance of the required number of instructors and/or tutors. The Instructor-in-charge is responsible for conducting the course, holding the examinations, evaluating the performance of the students, awarding grades at the end of the semester/summer term and transmitting the grades to the undergraduate office within the prescribed time limit.
- e) **Teaching Assignments** - The Instructors-in-Charge, instructors and tutors for all the courses offered by a department / interdisciplinary programme during the semester / summer term are designated by the concerned Head. If any other department/interdisciplinary programme is also required to participate in teaching a particular course, the respective Head designates the instructor and /or tutor.

Auditing of courses - A student may audit a course in addition to the prescribed academic load requirement with the permission of the Instructor-in-Charge. Under this arrangement, the student is simply auditing the course and the grade (if any) awarded to him/her in that course will not be entered in his/her Grade Report.

6.2 Evaluation

The evaluation of students in a course is a continuous process and is based on their performance in two mid-semester examinations, an end semester examination, quizzes/ short tests, tutorials, assignments, laboratory work (if any), make-up examinations (if applicable), etc.

a) **Schedule of Examinations:**

The schedule for the two mid-semester examinations, the end

semester examination and the make-up examination (if any) in core courses is prepared and announced by the Dean of Academic Affairs, whereas the schedule for these examinations in professional courses is prepared and notified by the respective DUGCs. All the examinations are usually held during the periods/days specified in the Academic Calendar.

b) Make-up Examinations:

If a student, for *bona fide* reasons such as illness, etc., fails to appear in the end-semester examination in one or more course(s), he/she may make a request personally or through someone to SUGC for a make-up examination within two days of the date of the scheduled examination. Such a request must, however, be made on a prescribed form (Appendix 5), available in the Undergraduate Office, giving reasons for the failure to appear in the end-semester examination with a certificate from a Medical Officer of the Institute Health Centre, in case the failure was due to illness.

Only one make-up examination, for the end-semester examination, is allowed per course. For failures to appear in mid-semester examinations, etc., it is entirely up to the Instructor to ascertain the proficiency of the student by whatever means he/she considers appropriate if he/she is satisfied of the student's *bona fides*.

6.3

Grading System

a) **Grades and Grade Points** - At the end of the semester/summer term, a student is awarded a letter grade in each of his/her courses by the concerned Instructor-in-Charge taking into account his/her performance in the various examinations, quizzes, assignments, laboratory work (if any), etc., besides regularity of attendance in classes. The grades are submitted in the undergraduate office within the prescribed time limit of 72 hours after the end semester examination.

Each department shall evolve a procedure for the award of letter grades in project courses.

There are five letter grades: A, B, C, D and F. The letter grades and their numerical equivalents on a 10-point scale (called Grade Points) are as follows:

| | | | | | |
|----------------|----|---|---|---|---|
| Letter Grade : | A | B | C | D | F |
| Grade Points : | 10 | 8 | 6 | 4 | 2 |

In addition, there are three letter grades, viz., I, S and X, which stand for Incomplete, Satisfactory and Unsatisfactory, respectively.

b) **Incomplete Grade 'I'** - A student may be awarded the grade 'I' (Incomplete) in a course if he/she has missed, for a genuine reason, a minor part of the course requirement but has done satisfactorily in all other parts. An 'I' grade is not awarded simply because a student has failed

to appear in examination(s). An 'I' grade must, however, be converted by the Instructor-in-Charge into an appropriate letter grade and communicated to the undergraduate office by the last date specified in the academic calendar. Any outstanding 'I' grade after this date shall be automatically converted into the 'F' grade.

- c) **Project Grades** – Project grades shall be submitted by the last date specified for the submission of grades. An 'I' grade will not be given for mere non-completion of project due to lack of facilities, etc. An 'I' grade may be given only on medical grounds.
- d) **Change of Grade Already Awarded** - A letter grade once awarded shall not be changed unless the request made by either the Instructor-in-Charge or another Instructor/tutor of the course is approved by the Chairman, Senate. Any such request for change of grade must, however, be made within six weeks of the start of the next semester in the prescribed form (Appendix 6) with all relevant records and justification.
- e) **Semester Performance Index (SPI)** – The Semester Performance Index (SPI) is a weighted average of the grade points earned by a student in all the courses credited and describes his/her academic performance in a semester. If the grade points associated with the letter grades awarded to a student are $g_1, g_2, g_3, g_4,$ and g_5 in five courses and the corresponding credits are $c_1, c_2, c_3, c_4,$ and c_5 , the SPI is given by

$$SPI = \frac{c_1g_1 + c_2g_2 + c_3g_3 + c_4g_4 + c_5g_5}{c_1 + c_2 + c_3 + c_4 + c_5}$$

S and X grades shall not be considered in the computation of the SPI.

- f) **Cumulative Performance Index (CPI)** - The Cumulative Performance Index (CPI) indicates the overall academic performance of a student in all the courses registered up to and including the latest completed semester/summer term. It is computed in the same manner as the SPI, considering all the courses (say, n), and is given by

$$CPI = \frac{\sum_{i=1}^n c_i g_i}{\sum_{i=1}^n c_i}$$

Whenever a student is permitted to repeat or substitute a course, the new letter grade replaces the old letter grade in the computation of the CPI, but, both the grades appear on his/her Grade Report.

- g) **Grade Report** - A copy of the Grade Report is issued to each student at the end of the semester. A duplicate copy, if required, can be obtained on payment of the prescribed fee.

Withholding of Grades – The grades of a student may be withheld if he/she has not paid his/her dues, or if there is a case of indiscipline pending against him/her, or for any other reason.

7. INADEQUATE ACADEMIC PERFORMANCE

The academic performance of each undergraduate student is reviewed by APEC at the end of a regular semester and is considered inadequate if his/her SPI / CPI is as under:

| BTech/BTech-MTech (Dual degree) /MSc (Int.) | MSc-PhD (Dual degree)/ MSc (2-year) |
|--|--|
| SPI: 4.5 or less; <i>or</i> CPI: less than 5.0 | SPI: 5.5 or less; <i>or</i> CPI: less than 6.0 |

Such a student is termed 'academically deficient'. Depending on the degree of inadequacy, a deficient student may be placed on *Warning* or *Academic Probation*, or his/her academic programme may be *Terminated*.

7.1 Warning

A student is placed on Warning if his/her SPI and CPI at the end of a regular semester are as follows:

| BTech/BTech-MTech (Dual degree)/MSc (Int.) | MSc-PhD (Dual degree)/ MSc (2 year) |
|---|---|
| a) SPI \leq 4.5 and CPI \geq 5.0 <i>or</i> b) SPI $>$ 4.5 and CPI $<$ 5.0 | a) SPI \leq 5.5 and CPI \geq 6.0 <i>or</i> b) SPI $>$ 5.5 and CPI $<$ 6.0 |

Such a student is required to sign an undertaking incorporating the following terms and conditions:

- i) He/She shall register for all courses (if available) in which the letter grade F is obtained,
- ii) He/She shall not hold any office in the Hall of Residence, Students Gymkhana or any other organization/body during academic probation.
- iii) Any other term/condition laid down by SUGC/Senate.

The parents/guardian will be requested to countersign the undertaking. If a student is unable to meet the terms/conditions due to some genuine reasons, he/she must indicate this to the DUGC/SUGC before the semester ends.

7.2

Academic Probation

A student is put on academic probation if his/her SPI and/or CPI at the end of a regular semester are as follows:

| BTech/BTech-MTech (Dual degree)/M.Sc.(Int.) | MSc-PhD (Dual degree)/ M.Sc. (2 year) |
|--|--|
| SPI \leq 4.5 and CPI $<$ 5.0 | SPI \leq 5.5 and CPI $<$ 6.0 |

Such a student is required to sign an undertaking incorporating the following terms and conditions:

- i) His/Her academic load shall be reduced. The student can register for a maximum of 17 credits.
- ii) He/She shall register for all courses (if available) in which the letter grade F is obtained.
- iii) He/She shall obtain a minimum SPI of 4.5 or 5.5 if belonging to B.Tech./ B.Tech.-M.Tech. (Dual-degree)/ M.Sc. (Integrated) or M.Sc. (2 year) programme, respectively.
- iv) He/She shall not hold any office in the Hall of Residence, Students Gymkhana or any other organization/body during academic probation.
- v) Any other term/condition laid down by SUGC/Senate.
- vi) He/She shall automatically leave the Institute if fails to fulfil any of the above conditions.

The parents/guardian will be requested to countersign the undertaking. If a student is unable to meet the terms/conditions due to some genuine reasons, he/she must indicate this to the DUGC/SUGC before the semester ends.

7.3

Termination of Programme

The programme of a student may be terminated by Senate if he/she

- a) is on Academic Probation and fails to secure a minimum SPI as under:

| Programme | Minimum SPI |
|--------------------------------|--------------------|
| B.Tech./M.Sc. (Integrated): | 4.5 |
| B.Tech.-M.Tech. (Dual degree): | 4.5 |
| M.Sc. (2 year): | 5.5 |
| M.Sc.-Ph.D. (Dual degree): | 5.5 |

- b) is absent without authorized leave of absence for a major part of the

semester and does not appear in the end-semester examination of the courses in which he/she is registered.

- c) fails to report and register by the last date of registration without any *bona fidé* reason.
- d) involves himself/herself, in violation of the code of conduct, in ragging, etc. and the Senate Student Affairs Committee (S-SAC)/ a special Institute committee makes a recommendation to that effect.

7.4 Reduced Academic Load

A student placed on *warning* or *academic probation* will be permitted a reduced load up to a minimum of 12 credits, if he/she so desires. However, the courses for which he/she registers will be decided by APEC/DUGC considering the input obtained from the Head, Counselling Service, Instructors, etc. The parents/guardian of such a student will be kept informed of his/her progress.

7.5 Appeal against Termination

A student whose programme is terminated on account of inadequate academic performance or otherwise has the right to appeal to the Chairman, Senate for reconsideration. While making the appeal against termination, he/she is expected to give reasons for his/her poor academic performance and/or to explain why his/her position merits reconsideration. The Senate shall take a final decision after considering all the available inputs. However, the Senate will not entertain any further appeal for review unless substantial additional information is brought to its notice.

8. LEAVE OF ABSENCE

Application for leave of absence should be addressed to the Chairman, SUGC and submitted to the Undergraduate Office with a medical certificate, if applicable. Leave must not usually be availed of without prior approval of the SUGC.

8.1 Mid-semester Recess and Vacation

Undergraduate students are entitled to avail of mid-semester recess and vacation as specified in the Academic Calendar.

8.2 Short Leave

Leave of absence during the semester shall be discouraged for all registered students. However, for *bona fidé* reasons, a student may be granted leave of absence during the semester as under:

Maximum of 15 days – on medical grounds

Maximum of 7 days – for any valid reason

8.3 Temporary Withdrawal / Semester Leave

A student is not normally allowed to withdraw from the academic programme temporarily and is expected to complete his/her studies without any break. However, for *bona fide* reasons and/or in exceptional circumstances, a student may be allowed to withdraw temporarily on leave of absence at the discretion of SUGC/ Senate for an extended period. Such leave of absence(s) shall ordinarily not exceed two semesters with or without break during the entire period of the academic programme.

Absence for a period of four or more weeks will result in automatic withdrawal from all courses in that semester.

A student who remains on authorized leave of absence due to ill health is required to submit a certificate from a Registered Medical Practitioner to the effect that he/she is sufficiently cured and is fit to resume his/her studies. The student will be allowed to register only when SUGC is fully satisfied of his/her state of health.

8.4 Permission to Proceed to other Institutions

In order to help a student to broaden his/her horizon and gain course/work experience, he/she may be permitted to proceed to other academic institutions in India or abroad as a non-degree student. The following guidelines and procedures apply for this purpose:

A student who satisfies the minimum eligibility conditions given below may spend up to two semesters and/or two summer terms in any academic institution of repute in India or abroad with prior permission of SUGC.

a) **Eligibility** -

- i) Completion of first four semesters of course work,
- ii) CPI of at least 8.0, and
- iii) no backlog of courses

b) **Procedure** – The student shall make an application to SUGC through the concerned DUGC, giving details of the proposed programme and shall submit a statement of purpose with sufficient information about the institution where he/she has chosen to spend time as a non-degree student.

The DUGC will then examine the student's proposal to determine whether the proposed programme is of a nature, both in quality and quantity, that, on successful completion, will justify the waiver of at least seven (07) credits per semester and/or four (04) credits per summer term. On the recommendation of the DUGC, SUGC may approve the proposal and grant permission, with leave of absence, to the student to proceed as a non-degree student to the selected institution. In such a case, the student will be informed about the requirements he/she must fulfil to apply for academic credit on his/her

return.

- c) **Transfer of Credits and Waiver in-lieu thereof** – Permission to proceed to another institution as a non-degree student does not imply that the student will automatically get waiver from the academic and other requirements of his/her ongoing undergraduate programme at the Institute.

However, on return, he/she may apply for waiver with an official transcript of the grades obtained by him/her at the selected institution as a non-degree student and other documents/material that the concerned DUGC may require for evaluation. The DUGC will determine, by whatever means it deems fit, the equivalent courses and/or requirements for which the student may be given a waiver in his/her undergraduate programme at the Institute.

On the recommendation of the DUGC, SUGC may allow a student waiver for a maximum of 32 credits in-lieu of his/her successful completion of the programme elsewhere as a non-degree student.

Against each course or requirement for which a waiver is granted, a 'W' would appear on the Grade Report with an explanatory note that it stands for waiver granted due to courses taken and/or work done at the selected institution elsewhere. All such courses and/or requirements will be deemed to carry zero credits for SPI/CPI calculations.

Those students who are selected by the Institute, using prescribed rules and procedures, to proceed on any Institutional Exchange Programme will also be governed by clause 8.4c for the transfer of academic credits, waiver, etc.

9. REQUIREMENTS

9.1 Minimum Duration and Maximum Residence

The minimum duration and maximum residence requirements for various undergraduate programmes are as under:

| Programme | Minimum Duration (Semesters) | Maximum Residence (Semesters) |
|--------------------------------|-------------------------------------|--------------------------------------|
| B.Tech.: | Eight (08) | Twelve (12) |
| B.Tech.-M.Tech. (Dual degree): | Ten (10) | Fifteen (15) |
| M.Sc.(Integrated): | Ten (10) | Fifteen (15) |
| M.Sc. (2 year): | Four (04) | Six (06) |
| M.Sc.-Ph.D. (Dual degree): | Eight (08) | |

The residence requirement of one semester is equivalent to registration for the normal academic load of courses during a semester.

Students of BTech, BTech-MTech (Dual-degree), and MSc (Int.) programmes who undertook slow-paced programme in their first semester are allowed two additional semesters to complete their requirements. (For example, maximum residence for a BTech student on slow-paced is 14 semesters.)

9.2 Transfer from BTech to MTech Part in Dual-degree Programmes

A student in a BTech-MTech (Dual-degree) programme shall be considered as a BTech student while he/she is in the first seven semesters of the programme. The student will be deemed to have migrated from BTech to MTech part of the program at the end of the 7th semester unless he/she has a backlog of more than 4 courses.

In case of the student with the backlogs, he/she will be deemed to have migrated to the MTech part of the program when the student has at most 40 credits remaining of the programme (excluding thesis credits)

The student cannot register for thesis credits till he/she has migrated to the MTech part of the programme.

9.3 Transfer from MSc to PhD Part in Dual-degree Programme

A student in a MSc-PhD (Dual-degree) programme shall be considered as an MSc student while he/she is in the first three semesters of the programme. The student will be deemed to have migrated from MSc to PhD part of the program at the end of the 3rd semester unless he/she has a backlog.

In case of the student with the backlogs, he/she will be deemed to have migrated to the PhD part of the program when the student has completed all

compulsory courses from the curriculum of the first three semesters of the programme, and has completed 8 more credits.

The student cannot register for thesis credits till he/she has migrated to the PhD part of the programme.

9.4 Academic

A student is required to complete successfully all the courses of the curriculum prescribed for his/her undergraduate programme and attain a minimum level of academic performance, i.e., obtain a minimum CPI as under:

| Programme | Minimum CPI |
|--|-------------|
| B.Tech.: | 5.0 |
| B.Tech.-M.Tech. (Dual degree, BTech part): | 5.0 |
| B.Tech.-M.Tech. (Dual degree, MTech part): | 6.5 |
| M.Sc.(Integrated): | 5.0 |
| M.Sc. (2 year): | 6.0 |
| M.Sc.-Ph.D. (Dual degree, MSc part): | 6.0 |

In BTech-MTech (Dual-degree), thesis work also has to be completed satisfactorily as per the procedures and rules stated in the Postgraduate manual.

9.5 Graduation

A student is deemed to have completed the requirements for graduation if he/she has

- a) met the residence and academic requirements outlined in Sections 9.1 and 9.4; however, in special cases, the graduation requirement may be reduced by one credit point each in DE and OE, in case a student has taken 3-credit point courses.
- b) satisfied additional requirements, if any, of the concerned department,
- c) paid all dues to the Institute and the Halls of Residence, and
- d) no case of indiscipline is pending against him/her.

If a student of B.Tech.-M.Tech. (Dual degree) programme is not likely to complete the graduation requirements for his/her programme within the minimum residency period of 10 semesters, he/she will be considered on a case to case basis for the award B.Tech. degree only at the end of five years or later, if he/she completes all the graduation requirements of the B.Tech. programme.

If a student of M.Sc.-Ph.D. (Dual degree) programme is unable to clear the comprehensive examination by the end of the sixth semester, he/she will be considered on a case-to-case basis for the award of M.Sc. degree only, if he/she completes all the graduation requirements of the M.Sc. (2 year) programme.

9.6 Relaxation Provisions

Senate may grant relaxation in the prescribed minimum residence and/or academic requirements to a student in view of the work done by him/her in the Institute or elsewhere, to the extent considered appropriate according to the merit of the case.

A student failing to complete the programme even within the maximum duration specified may be allowed by the Senate to continue depending on the merits of the case.

10. DEGREES

10.1 Award of Degrees

A student who completes all the graduation requirements specified in **Section 9.4** is recommended by the Senate to the Board of Governors (BOG) for the award of the appropriate degree in the ensuing convocation. The degree can be awarded only after the BOG accords its approval.

10.2 Withdrawal of the Degree

Under extremely exceptional circumstances, where gross violation of the graduation requirements is detected at a later stage, the Senate may recommend to the Board of Governors withdrawal of a degree already awarded.

11. SCHOLARSHIPS, PRIZES AND MEDALS

The Senate Scholarships and Prizes Committee (SSPC) determines the general policy regarding recommendations for the award of the different types of scholarships, stipends, medals and prizes available to Institute students. It also coordinates and reviews the application of the policy and makes recommendations to the Senate for its final decision. The detailed norms and conditions for the award of various scholarships, prizes and medals are contained in the brochure entitled “Rules and Procedures for Scholarships and Prizes” of the Institute.

11.1 Scholarships

A number of Merit-cum-Means scholarships, freeships (i.e., tuition waiver), free basic messing and pocket allowance (for SC and ST categories), and endowment scholarships /fellowships are awarded to the undergraduate students according to the rules and procedures laid down by the Senate.

The scholarships, etc. are paid up to the month in which a student completes all the requirements of his/her programme.

These scholarships, etc. are liable to be withdrawn, partially or wholly, in case of misconduct, deliberate concealment of material, facts and/or giving false information.

A student leaving the Institute on his/her own accord without completing the programme of study may be required to refund the amount of scholarship, etc. received during the academic session in which he/ she leaves the Institute.

11.2 Prizes and Medals

To promote and recognize academic excellence, constructive leadership and overall growth and development of students, the Senate awards a number of prizes and medals, established by the Institute on its own or through endowments/ grants made by donors, with the approval of the Board of Governors.

12. CONDUCT AND DISCIPLINE

12.1 Code of Conduct

Each student shall conduct himself/herself in a manner befitting his/her association with an Institute of national importance. He/she is expected not to indulge in any activity which is likely to bring down the prestige of the Institute. He/She should also show due respect and courtesy to the teachers, administrators, officers and employees of the Institute, and good neighbourly behaviour to fellow students. Due attention and courtesy is to be paid to visitors to the Institute and residents of the Campus.

Lack of courtesy and decorum, unbecoming conduct (both within and outside the Institute), wilful damage and/or removal of Institute property or belongings of fellow students, disturbing others in their studies, adoption of unfair means during examinations, breach of rules and regulations of the Institute, noisy and unseemly behaviour and similar other undesirable activities shall constitute violation of the Code of Conduct for students.

Ragging in any form is strictly prohibited and is considered a serious offence.

12.2 Disciplinary Actions and Related Matter

Violation of the Code of Conduct shall invite disciplinary action which may include punishment such as reprimand, disciplinary probation, fine, debarring from examinations, withdrawal of scholarship and/or placement services, withholding of grades and/or degrees, cancellation of registration and even expulsion from the Institute.

The Instructor-in-Charge of a course shall have the power to debar a student

from the examination in which he/she is detected to be using unfair means. The Instructor/Tutor shall have the power to take appropriate action against a student who misbehaves in his/ her class.

The Warden-in-Charge of a Hall of Residence has the power to reprimand, impose fine or take any other suitable measure against a resident who violates either the Code of Conduct or rules and regulations pertaining to the concerned Hall of Residence.

Involvement of a student in ragging may lead to his/her expulsion from the Institute.

The Senate Student Affairs Committee (S-SAC) investigates alleged misdemeanors, complaints, etc. and recommends a suitable course of action. Violation of the Code of Conduct by an individual or of a group of students can be referred to this committee by a student, teacher or other functionary of the Institute. Further, in very exceptional circumstances, the Chairman, Senate may appoint a special committee to investigate and/or recommend appropriate action for any act of gross indiscipline involving an individual or a number of students, which, in his/her view, may tarnish the image of the Institute.

The recommendation for any action, including expulsion of a student from the Institute, shall be referred to the Senate for its final decision.

A student who feels aggrieved with the punishment awarded may, however, appeal to the Chairman, Senate stating clearly the case and explaining his/her position, and seeking reconsideration of the decision.

The Senate may not recommend a student, who is found guilty of some major offence, to the Board of Governors for the award of a degree/diploma/certificate even if he/she has satisfactorily completed all the academic requirements.

13. AMENDMENTS

Notwithstanding anything contained in this manual, the Senate of the Indian Institute of Technology, Kanpur reserves the right to modify/amend without notice, the curricula, procedures, requirements, and rules pertaining to its undergraduate programmes.

Guidelines for Change of Programme

A student may be allowed change of programme on the basis of his/her academic performance, subject to strength constraints of the departments, using the guidelines given below. The branch change list is prepared based on vacancy existing in each category (GEN, SC, ST). Thus, a GEN vacancy can be filled only by a GEN student, an SC vacancy by an SC student and an ST vacancy by an ST student. Change of programme is a privilege and not a right.

Foreign Nationals who have been sponsored by their respective Governments and/or Government of India for specific courses are not eligible for change of programme.

A. At the end of Semester II:

- 1. Application for change of programme** should be made at the end of second semester of B.Tech., B.Tech.-M.Tech. (Dual degree) and M.Sc. (Integrated) courses, to the Chairman, SUGC.
- 2. Eligibility criteria**
 - a)** The CPI at the end of 2nd semester should be
 - equal to or greater than 7.0 for SC and ST applicants
 - equal to or greater than 8.0 for other applicants
 - b)** Should have passed all first year courses (including courses where S/X grades are awarded)
- 3. Strength constraints**
No programme may exceed the larger of its existing and sanctioned strengths or fall below 60% of its sanctioned strength as a result of these changes.
- 4. Procedure**
As many programme changes as possible are granted in decreasing order of CPI to applicants, subject to eligibility and strength constraints of the programmes.

B. At the end of Semester III and IV:

| | |
|-----------|--|
| 1. | Application for change of programme should be made at the end of third or fourth semester of B.Tech., B.Tech.-M.Tech. (Dual degree) and M.Sc. (Integrated) courses, to the Chairman, SUGC. |
| 2. | Eligibility criteria |
| | <ol style="list-style-type: none"> a) The applicant must have attempted all courses specified for the first year of the programme. b) The applicant must have passed all first year courses where S/X grades are awarded. c) CPI, for the purpose of this rule, will be computed based on all courses specified for the first year of the programme. In case a particular course has been attempted more than once, the grade obtained in the first attempt will be counted. |
| 3. | Strength constraints |
| | No programme may exceed the larger of its existing and sanctioned strengths or fall |

| | |
|-----------|--|
| | below 60% of its sanctioned strength as a result of these changes. |
| 4. | Procedure |
| | As many programme changes as possible are granted in decreasing order of CPI to applicants, subject to eligibility and strength constraints of the programmes. |

C. From BTech to BTech-MTech Dual-degree:

| | |
|-----------|--|
| 1. | The last date of application for change of programme from BTech to BTech-MTech Dual-degree within the same department is July 01 before the registration for the students in 7 th semester which is the beginning of the BT-MT (Dual Degree) programme. Email applications will also be accepted. In case for genuine reasons, a student applies for programme change in his/her 7 th semester, it will be considered as a special case subject to the approval of the Chairman, Senate. (Approved in Senate 2008-09/3rd/Minutes-22.12.2008). |
| 2. | Eligibility criteria |
| | <ul style="list-style-type: none"> a) The applicant should have a minimum CPI of 7.0 at the time of application. b) Change of programme can be granted only on specific positive recommendation of DUGC. |
| 3. | Procedure |
| | These applications are considered by Senate on a case-to-case basis. |

D. Programme Change on Compassionate Ground:

| | |
|-----------|--|
| 1. | Application for change of programme from a more competitive one to a less competitive one can be made any time upto the end of 4 th semester of B.Tech, B.Tech.-M.Tech. dual-degree or M.Sc. (Integrated) programmes, to the Chairman, SUGC. |
| 2. | Eligibility criteria |
| | <ul style="list-style-type: none"> a) Only students belonging to SC or ST categories AND doing slow-paced programme are eligible. b) The applicant should have a CPI of less than 5.5 at the time of application. |
| 3. | Procedure |
| | These applications are considered by Senate on a case-to-case basis. |

Course Structure for Under-Graduate Programs:

B.Tech. (Aerospace Engineering)

| | | S E M E S T E R | | | | | | |
|----------------------------|---------------------|-----------------|--------|---------|-------|-------|---------|--------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH |
| | PHY102 | PHY101 | MTH203 | HSS-I-2 | AE321 | AE312 | AE411 | AE422 |
| | MTH101 | CHM101 | CHM201 | ESO202 | AE331 | AE322 | AE461 | AE462 |
| | HSS-I-1/ ENG112N | PHY103 | ESO204 | TA201 | AE341 | AE332 | AE471 | AE472 |
| | | MTH102 | ESO212 | AE232 | AE361 | AE342 | | |
| | TA101 | ESC101 | AE231 | AE211 | | | | |
| | ESC102 | AE100 | | | | | | |
| PE101 | PE102 | | | | | | | |

In addition to above, the student must complete the following credits:

DE 08 Credits
 OE 12 Credits
 HSS-2 08 Credits
 SE 08 Credits

B.Tech. (Biological Sciences and Biological Engineering)

| | | S E M E S T E R | | | | | | |
|----------------------------|---------------------|-----------------|----------------|-------------------|---------------|---------------|---------|--------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH |
| | CHM101 | TA101 | MTH203 | HSS-I-2 | BSE322 | BSE314 | | |
| | PHY101 | PHY103 | CHM201 | TA201 | BSE341 | BSE392 | | BSE499 |
| | PHY102 | MTH102 | BSE-212 | ESO-II | BSE391 | | BSE491 | |
| | | | | | BSE352 | | BSE498 | |
| | MTH101 | ESC102 | ESO-1 | | | | | |
| | HSS-I-1/ ENG112N | BSE100 | ESO-219 | BSE216 (ESO-3) | | | | |
| | ESC101 | PE102 | | BSE292 | | | | |
| PE101 | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 16 Credits
 OE **16 Credits**
 HSS-2 08 Credits
 SE **12 Credits**

The above template is valid for Y7 batch or students joining later in BSBE. The students of other batches must contact the Convener, DUGC, BSBE for their course templates.

B.Tech. (Chemical Engineering)

| | | S E M E S T E R | | | | | | |
|--|---------------------|------------------------|--------------|---------------|--------------|--------------|----------------|---------------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH |
| | CHM101 | TA101 | MTH203 | HSS-I-2 | CHE312 | CHE313 | CHE452 | CHE453 |
| | PHY101 | PHY103 | CHM201 | TA201 | CHE331 | CHE362 | CHE492 | CHE463 |
| | PHY102 | MTH102 | ESO202 | ESO218 | CHE361 | CHE381 | CHE494 | |
| | MTH101 | ESC102 | ESO212 | CHE211 | | CHE391 | CHE495 | |
| | HSS-I-1/ ENG112N | CHE100 | CHE251 | CHE221 | | | | |
| | ESC101 | PE102 | | | | | | |
| | PE101 | | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 12 Credits
 HSS-2 08 Credits
 SE 08 Credits

B.Tech. (Civil Engineering)

| | | S E M E S T E R | | | | | | |
|--|---------------------|------------------------|--------------|---------------|--------------|--------------|----------------|---------------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH |
| | PHY102 | PHY101 | MTH203 | HSS-I-2 | CE321 | CE312 | CE451 | CE492 |
| | MTH101 | CHM101 | CHM201 | ESO218 | CE331 | CE322 | CE491 | |
| | HSS-I-1/ ENG112N | PHY103 | ESO204 | TA201 | CE361 | CE332 | | |
| | | MTH102 | ESO212 | CE222 | CE371 | CE362 | | |
| | TA101 | ESC101 | CHE251 | CE242 | CE311 | CE373 | | |
| | ESC102 | CE100 | | | | CE382 | | |
| PE101 | PE102 | | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 12 Credits
 HSS-2 08 Credits
 SE 08 Credits

The above template is valid for Y6 and Y7 batch students or students joining later in CE. The students of other batches must contact the DUGC Convener, CE for their course templates.

B.Tech. (Computer Science and Engineering)

| | | S E M E S T E R | | | | | | |
|----------------------------|---------------------|-----------------|--------|---------|---------------------------|---------------------------|---------|--------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH |
| | CHM101 | TA101 | MTH203 | HSS-I-2 | CS330 | CS335 | CS498 | CS499 |
| | PHY101 | PHY103 | CHM201 | TA201 | CS340 | CS345 | | |
| | PHY102 | MTH102 | CS220 | CS201 | ONE OUT | ONE OUT | | |
| | MTH101 | ESC102 | ESO-1 | CS355 | OF | OF | | |
| | HSS-I-1/ ENG112N | CS100 | ESO211 | OE-1 | CS350, CS425, CS455 | CS315, CS365, CS422 | | |
| | ESC101 | PE102 | | | | | | |
| | PE101 | | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 20 Credits
 HSS-2 08 Credits
 SE 08 Credits

B.Tech. (Electrical Engineering)

| | | S E M E S T E R | | | | | | |
|----------------------------|---------------------|-----------------|---|---------|-------|------------------|---------|--------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH |
| | PHY102 | PHY101 | MTH203 | HSS-I-2 | EE320 | EE340 | EE491 | EE492 |
| | MTH101 | CHM101 | CHM201 | ESO209 | EE330 | EE381 | | |
| | TA101 | MTH102 | TA201 | ESO210 | EE370 | 3 OUT OF: | | |
| | ESC102 | ESC101 | EE200 | EE210 | EE380 | EE301 | | |
| | PE101 | EE100 | ESO202/ ESO211/ ESO214/ ESO218 | EE250 | | EE311 | | |
| | HSS-I-1/ ENG112N | PHY103 | | | | EE321 | | |
| | | PE102 | | | | EE360 | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 16 Credits
 HSS-2 08 Credits
 SE 08 Credits

B.Tech. (Materials and Metallurgical Engineering)

| C O U R S E | S E M E S T E R | | | | | | | |
|----------------------------|---------------------|--------|--------|---------|--------|--------|---------|--------|
| | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH |
| | CHM101 | TA101 | MTH203 | HSS-I-2 | MME310 | MME331 | MME410 | MME480 |
| | PHY101 | PHY103 | CHM201 | ESO204 | MME320 | MME340 | MME415 | MME499 |
| | PHY102 | MTH102 | ESO212 | ESO210 | MME330 | MME350 | MME470 | |
| | MTH101 | ESC102 | TA201 | MME210 | | MME370 | MME498 | |
| | ESC101 | MME100 | MME200 | MME250 | | MME390 | | |
| | PE101 | PE102 | | | | | | |
| | HSS-I-1/ ENG112N | | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 12 Credits
 HSS-2 08 Credits
 SE 08 Credits

B.Tech. (Mechanical Engineering)

| C O U R S E | S E M E S T E R | | | | | | | |
|----------------------------|---------------------|----------------|--------|---------|-------|-------|---------|--------|
| | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH |
| | PHY102 | PHY101 | MTH203 | HSS-I-2 | ME321 | ME301 | ME300 | ME452 |
| | MTH101 | CHM101 | CHM201 | ESO204 | ME341 | ME351 | ME401 | ME461 |
| | TA101 | MTH102 | TA201 | ESO214 | ME352 | ME353 | ME451 | |
| | ESC102 | ESC101 | ESO202 | ME231 | ME361 | ME371 | ME453 | |
| | PE101 | PHY103 | ESO210 | ME251 | | | ME471 | |
| | HSS-I-1/ ENG112N | ME100 PE102 | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 12 Credits
 HSS-2 08 Credits
 SE 08 Credits

M.Sc. Integrated (Chemistry)

| | | S E M E S T E R | | | | | | | | | |
|----------------------------|--------------------|-----------------|--------|---------|--------|--------|---------|--------|--------|--------|--------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | NINTH | TENTH | |
| | CHM101 | TA101 | MTH203 | HSS-I-2 | CHM401 | CHM343 | CHM423 | CHM443 | CHM700 | CHM700 | |
| | PHY101 | PHY103 | CHM201 | TA201 | CHM421 | CHM402 | CHM611 | CHM481 | | CHM800 | |
| | PHY102 | MTH102 | ESO-1 | CHM222 | CHM441 | CHM422 | CHM621 | | CHM664 | CHM801 | CHM801 |
| | MTH101 | ESC102 | ESO-2 | CHM302 | CHM503 | CHM442 | CHM664 | | | | |
| | ESC101 | CHM100 | CHM301 | CHM341 | | | | | | | |
| | PE101 | PE102 | | CHM404 | | | | | | | |
| | HSS-I-1/ ENG112 | | | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 24 Credits
 HSS-2 08 Credits
 NDE 08 Credits

M.Sc. Integrated (Economics)

| | | S E M E S T E R | | | | | | | | | |
|----------------------------|--------------------|-----------------|--------|---------|--------|--------|---------|--------|--------|--------|--|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | NINTH | TENTH | |
| | CHM101 | TA101 | MTH203 | HSS-I-2 | ECO311 | ECO303 | ECO413 | ECO423 | ECO535 | ECO599 | |
| | PHY101 | PHY103 | CHM201 | ESO209 | ECO321 | ECO312 | ECO422 | ECO424 | ECO543 | | |
| | PHY102 | MTH102 | TA201 | ECO202 | ECO333 | ECO332 | ECO434 | | ECO598 | | |
| | MTH101 | ESC102 | ESO-1 | ECO231 | ECO341 | | | | | | |
| | ESC101 | ECO100 | ECO201 | OE-1 | | | | | | | |
| | PE101 | PE102 | | | | | | | | | |
| | HSS-I-1/ ENG112 | | | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 24 Credits
 OE 16 Credits
 HSS-2 08 Credits
 NDE 08 Credits

M.Sc. Integrated (Mathematics and Scientific Computing)

| | | S E M E S T E R | | | | | | | | | |
|----------------------------|--------------------|-----------------|--------|---------|--------|--------|---------|--------|--------|--------|--|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | NINTH | TENTH | |
| | CHM101 | TA101 | MTH203 | HSS-I-2 | MTH301 | MTH304 | MTH403 | | MTH598 | MTH599 | |
| | PHY101 | PHY103 | CHM201 | ESO209 | MTH311 | MTH306 | MTH421 | | | | |
| | PHY102 | MTH102 | TA201 | MTH202 | MTH401 | MTH308 | MTH423 | | | | |
| | MTH101 | ESC102 | ESO211 | MTH204 | | | | | | | |
| | ESC101 | MTH100 | MTH201 | MTH302 | | | | | | | |
| | PE101 | PE102 | | | | | | | | | |
| | HSS-I-1/ ENG112 | | | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 16 Credits
 HSS-2 08 Credits
 GE * 28 Credits
 NDE 08 Credits

* **Group Electives** - Department prescribes two lists of courses from which 28 credits have to be passed, with a minimum of 8 credits from either list.

The above template is valid for Y7 batch students or students joining later in Maths & Scientific Computing. The students of other batches must contact the DUGC Convener, Maths & Scientific Computing for their course templates.

M.Sc. Integrated (Physics)

| | | S E M E S T E R | | | | | | | | | |
|----------------------------|--------------------|-----------------|-------------------|---------|--------|--------|---------|--------|--------|--------|--|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | NINTH | TENTH | |
| | CHM101 | PHY103 | MTH203 | HSS-I-2 | PHY315 | PHY412 | PHY461 | PHY462 | PHY563 | PHY566 | |
| | PHY101 | MTH102 | CHM201 | TA201 | PHY401 | PHY422 | PHY543 | PHY524 | PHY565 | PHY568 | |
| | PHY102 | TA101 | ESO212/ PHY204 | PHY204 | PHY421 | PHY432 | PHY552 | PHY553 | | | |
| | MTH101 | ESC102 | ESO214 | PHY210 | PHY431 | | | | | | |
| | ESC101 | PHY100 | ESO-2 | PHY218 | | | | | | | |
| | PE101 | PE102 | PHY224 | | | | | | | | |
| | HSS-I-1/ ENG112 | | | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 08 Credits
 OE 28 Credits
 HSS-2 08 Credits
 NDE 08 Credits

B.Tech. – M.Tech. Dual-Degree (Aerospace Engineering)

| S E M E S T E R | | | | | | | | | | | |
|--|---------------------|--------|--------|---------|-------|-------|---------|--------|------|-------|-------|
| | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | SUMM | NINTH | TENTH |
| C O U R S E | PHY102 | PHY101 | MTH203 | HSS-I-2 | AE321 | AE312 | AE411N | AE422 | | | |
| | MTH101 | CHM101 | CHM201 | ESO202 | AE331 | AE322 | AE461 | AE462 | | | |
| | HSS-I-1/ ENG112N | PHY103 | ESO204 | TA201 | AE341 | AE332 | | | | | |
| | TA101 | MTH102 | ESO212 | AE232 | AE361 | AE342 | | | | | |
| | ESC102 | ESC101 | AE231 | AE211 | | | | | | | |
| | PE101 | AE100 | | | | | | | | | |
| | PE102 | | | | | | | | | | |

In addition to above, the student must complete the following credits:

| | |
|-----------------------|------------|
| DE | 24 Credits |
| OE | 08 Credits |
| HSS-2 | 08 Credits |
| SE | 04 Credits |
| M.TECH. THESIS | 32 Credits |

PG CPI to be computed from compulsory courses of 8th semester and 16 credits of DE.

B.Tech. – M.Tech. Dual-Degree (Chemical Engineering)

| S E M E S T E R | | | | | | | | | | | |
|--|--------|--------|--------|---------|--------|--------|---------|--------|------|-------|-------|
| | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | SUMM | NINTH | TENTH |
| C O U R S E | CHM101 | TA101 | MTH203 | HSS-I-2 | CHE312 | CHE313 | CHE452 | CHE453 | | | |
| | PHY101 | PHY103 | CHM201 | TA201 | CHE331 | CHE362 | CHE492 | CHE463 | | | |
| | PHY102 | MTH102 | ESO202 | ESO218 | CHE361 | CHE381 | CHE494 | CHE701 | | | |
| | MTH101 | ESC102 | ESO212 | CHE211 | | CHE391 | | | | | |
| | ESC101 | CHE100 | CHE251 | CHE221 | | | | | | | |
| | PE101 | PE102 | | | | | | | | | |
| HSS-I-1/ ENG112N | | | | | | | | | | | |

In addition to above, the student must complete the following credits:

| | |
|-----------------------|------------|
| DE (PG) | 24 Credits |
| OE | 08 Credits |
| HSS-2 | 08 Credits |
| SE | 04 Credits |
| M.TECH. THESIS | 36 Credits |

PG CPI to be computed from compulsory courses of 8th semester and 12 credits of DE (PG).

Note: Between 7th and 8th semesters, students are required to take at least one compulsory course in three of the four subject streams offered by the department. The subject streams are:

1. Transport Phenomena (CHE611 or equivalent)
2. Kinetics and Catalysis (CHE631, CHE633, or equivalent)
3. Thermodynamics (CHE621 or equivalent)
4. Advanced Mathematics (CHE641 or equivalent)

B.Tech. – M.Tech. Dual-Degree (Civil Engineering)

| S E M E S T E R | | | | | | | | | | | |
|----------------------------|---------------------|--------|--------|---------|--------------|-------|--------------|--------------|------|-------|-------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | SUMM | NINTH | TENTH |
| | PHY102 | PHY101 | MTH203 | HSS-I-2 | CE321 | CE312 | CE491 | CE492 | | | |
| | MTH101 | CHM101 | CHM201 | ESO218 | CE331 | CE322 | CE451 | | | | |
| | HSS-I-1/ ENGL12N | PHY103 | ESO204 | TA201 | CE361 | CE332 | | | | | |
| | | MTH102 | ESO212 | CE222 | CE371 | CE362 | | | | | |
| | TA101 | ESC101 | CE251 | CE242 | CE311 | CE373 | | | | | |
| | ESC102 | CE100 | | | | CE382 | | | | | |
| PE101 | PE102 | | | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 04 Credits
 DE (PG) 28 Credits
 HSS-2 08 Credits
 SE 04 Credits
 M.TECH. 36 Credits
 THESIS

PG CPI to be computed from 20 credits of DE (PG).

The above template is valid for Y6 and Y7 batch BT-MT students or students joining later in CE.
 The students of other batches must contact the DUGC Convener, CE for their course templates.

B.Tech. – M.Tech. Dual-Degree (Computer Science and Engineering)

| S E M E S T E R | | | | | | | | | | | |
|----------------------------|---------------------|--------|--------|---------|----------------|----------------|---------|--------|------|-------|-------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | SUMM | NINTH | TENTH |
| | CHM101 | TA101 | MTH203 | HSS-I-2 | CS330 | CS335 | | | | | |
| | PHY101 | PHY103 | CHM201 | TA201 | CS340 | CS345 | | | | | |
| | PHY102 | MTH102 | ESO-1 | CS201 | ONE OUT | ONE OUT | | | | | |
| | MTH101 | ESC102 | ESO211 | CS355 | OE : | OE : | | | | | |
| | HSS-I-1/ ENGL12N | CS100 | CS220 | OE-1 | CS350, | CS315, | | | | | |
| | | | | | CS425, | CS365, | | | | | |
| ESC101 | PE102 | | | CS455 | CS422 | | | | | | |
| PE101 | | | | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 DE (PG) 24 Credits
 OE 08 Credits
 HSS-2 08 Credits
 SE 04 Credits
 M.TECH THESIS 36 Credits

PG CPI to be computed from 20 credits of DE (PG).

B.Tech. – M.Tech. Dual-Degree (Electrical Engineering)

| S E M E S T E R | | | | | | | | | | | |
|----------------------------|---------------------|--------|------------------------------|---------|-------|--|---------|--------|-------|-------|-------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | SUMM. | NINTH | TENTH |
| | PHY102 | PHY101 | MTH203 | HSS-I-2 | EE320 | EE340 | | | | | |
| | MTH101 | CHM101 | CHM201 | ESO209 | EE330 | EE381 | | | | | |
| | HSS-I-1/ ENG112N | PHY103 | TA201 | ESO210 | EE370 | 3 OUT OF: EE301 EE311 EE321 EE360 | | | | | |
| | TA101 | ESC101 | ESO202/ EE250 | | | | | | | | |
| | ESC102 | EE100 | ESO211/ ESO214/ ESO218 | | | | | | | | |
| | PE101 | PE102 | | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 12 Credits
 OE 04 Credits
 OE (PG) 20 Credits
 DE (PG) 04 Credits
 HSS-2 08 Credits
 SE 04 Credits
 M.TECH. 36 Credits
 THESIS

PG CPI to be computed from 16 credits of OE (PG) and 4 credits of DE.

B.Tech. – M.Tech. Dual-Degree (Mechanical Engineering)

| S E M E S T E R | | | | | | | | | | | |
|----------------------------|---------------------|--------|--------|---------|-------|-------|---------|--------|-------|-------|-------|
| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | SEVENTH | EIGHTH | SUMM. | NINTH | TENTH |
| | PHY102 | PHY101 | MTH203 | HSS-I-2 | ME321 | ME301 | ME300 | ME461 | | | |
| | MTH101 | CHM101 | CHM201 | ESO204 | ME341 | ME351 | ME401 | | | | |
| | TA101 | MTH102 | TA201 | ESO214 | ME352 | ME353 | ME453 | | | | |
| | ESC102 | ESC101 | ESO202 | ME231 | ME361 | ME371 | ME471 | | | | |
| | PE101 | PHY103 | ESO210 | ME251 | | | | | | | |
| | HSS-I-1/ ENG112N | ME100 | | | | | | | | | |
| | | PE102 | | | | | | | | | |

In addition to above, the student must complete the following credits:

DE 04 Credits
 DE (PG) 20 Credits
 OE 04 Credits
 OE (PG) 04 Credits
 HSS-2 08 Credits
 SE 04 Credits
 M.TECH. 32 Credits
 THESIS

PG CPI to be computed from compulsory course of 8th semester, 12 credits of DE (PG), 4 credits of OE (PG), and 4 credits of HSS-2.

M.Sc. 2-Year (Chemistry)

| C O U R S E | SEMESTER | | | |
|--|-----------------|---------------|--------------|---------------|
| | FIRST | SECOND | THIRD | FOURTH |
| | CHM 401 | CHM 402 | CHM 503 | CHM 700 |
| | CHM 421 | CHM 422 | CHM 611 | CHM 800 |
| | CHM 423 | CHM 442 | CHM 621 | CHM 801 |
| | CHM 441 | CHM 443 | CHM 664 | DE-4 |
| | CHM 521 | CHM 481 | DE-2 | DE-5 |
| | DE-1 | DE-3 | | |
| UNITS | 18 | 24 | 22 | 20 |

In addition to above, the student must complete the following credits:

DE 20 Credits

M.Sc. 2-Year (Mathematics)

| C O U R S E | SEMESTER | | | |
|--|-----------------|---------------|--------------|-----------------|
| | FIRST | SECOND | THIRD | FOURTH |
| | MTH 201N | MTH 204 | MTH 403 | MTH 306 |
| | MTH 301 | MTH304 | MTH 405 | MTH 424 |
| | MTH 409 | MTH308 | MTH 421 | MTH498/ DE-2 |
| | MTH 423 | MTH404 | DE-1 OE-1 | DE-3 |
| MTH 428 | ESO 209 | | OE-2 | |
| UNITS | 20 | 20 | 20 | 24 |

In addition to above, the student must complete the following credits:

DE 12 Credits **OR**

DE 08 Credits + MTH 598 4-Credits

OE 08 Credits

M.Sc. 2-Year (Statistics)

| C O U R S E | SEMESTER | | | |
|--|-----------------|---------------|--------------|-----------------|
| | FIRST | SECOND | THIRD | FOURTH |
| | MTH 311 | MTH 306 | MTH 513 | MTH 511 |
| | MTH 409 | MTH 411 | MTH 515 | MTH 514 |
| | MTH 413 | MTH 412 | MTH517 | MTH 516 |
| | MTH 415 | MTH 416 | DE-1 | MTH498/ DE-2 |
| MTH 417 | MTH 418 | OE-1 | OE-2 | |
| UNITS | 20 | 20 | 20 | 24 |

In addition to above, the student must complete the following credits:

DE 08 Credits **OR**

DE 04 Credits + MTH 598 4-Credits

OE 08 Credits

M.Sc. 2-Year (Physics)

| C O U R S E | SEMESTER | | | |
|--|------------------------|------------------------|-----------------|-------------------------|
| | FIRST | SECOND | THIRD | FOURTH |
| | PHY 401 | PHY 412 | PHY 543 | PHY 524 |
| | PHY 421 | PHY 422 | PHY 552 | PHY 553 |
| | PHY 431 | PHY 432 | PHY 563 | PHY 566 |
| | PHY 441 (5) PHY 461 | PHY 462 PHY 473 (5) | PHY 565 DE-1 | PHY 568 DE-2 DE-3 |
| UNITS | 21 | 21 | 20 | 24 |

In addition to above, the student must complete the following credits:

DE 12 Credits

M.Sc. – Ph.D. Dual-Degree (Physics)

| C O U R S E | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH |
|--|------------------------|------------------------|-----------------|-----------------|--------------|--------------|
| | PHY 401 | PHY 412 | PHY 543/DE3 | PHY 524 | PHY 799 (8) | |
| | PHY 421 | PHY 422 | PHY 552 | PHY 568 | PHY543/DE3 | |
| | PHY 431 | PHY 432 | PHY 563 | PHY 553 | DE-4 | |
| | PHY 441 (5) PHY 461 | PHY 462 PHY 473 (5) | PHY 565 DE-1 | PHY 566 DE-2 | | |
| | UNITS | 21 | 21 | 20 | 20 | 16 |

In addition to above, the student must complete the following credits:

PHY543 04 Credits
 DE 16 Credits
 PhD Thesis As per PG curriculum

Course Types:

HSS-I HSS Level I
HSS-II HSS Level 2
DE Department Elective (can be UG or PG)
OE Open Elective (can be UG or PG)
DE (PG) Department Elective (must be PG: 600-level and higher)
OE (PG) Open Elective (must be PG: 600-level and higher)
SE Science Elective
NDE Non-Department Elective (can be UG or PG)
GE Group Elective

Undergraduate Courses

Course Number and Title

Each undergraduate course has a unique number consisting of a code to identify the department/interdisciplinary programme with 2 to 3 characters of English alphabet followed by a *three-digit* number beginning with 1, 2, 3, 4 or 5. In case of Humanities and Social Sciences, separate identification codes are used for each of the approved disciplines. Similarly, for some core courses, different codes bearing 2 to 3 characters of English alphabet (e.g., TA, ESc, PE, ESO) are assigned for identification. A letter 'S' is suffixed in the end to represent a slow-paced course. Each course has an appropriate title.

Course Credits

The credits of an undergraduate course depend upon the academic load which, in turn is determined by the number of contact hours (lectures and tutorials), laboratory hours (if applicable) and additional hours that a student is expected to devote per week. If L, T, P and D represent number of lecture, tutorial, laboratory and discussion hours per week, respectively for a course, its academic load is given by

$$\text{Academic load} = 3.0 \times L + 1.0 \times T + 1.5 \times P + 0.0 \times D$$

For other courses like projects, independent study, etc., the academic load reflects the total number of hours per week the student is expected to work. The credits of a course are related to its academic load as follows:

| Academic load (Number of hours of work for a week) | Credits [C] |
|---|-------------|
| 05-06 | 2 |
| 07-08 | 3 |
| 09-12 | 4 |
| 13-15 | 5 |

Thus, a course may usually have credits in the range of 2-5 with break-up as L-T-D-P-[C], where [C] indicates the credits, determined with the procedure outlined above. Prerequisites, if applicable, are also mentioned. A few courses without involving formal lectures, tutorials, or laboratory sessions like Physical Education, Industrial Training, Seminar, etc. are assigned zero credits.

Approval of a New Course

A new course can be proposed by any faculty member in a prescribed format (Appendix 4) at least two months before the registration date of the semester in which it is intended to be offered for the first time. The Convener, DUGC of the concerned department/interdisciplinary programme sends out the proposal to all other DUGC Convenors for circulation among faculty members to elicit their comments and suggestions, with a copy to the Chairman, SUGC. After a minimum period of five weeks, the proposal is revised (if necessary), taking into account all the comments / suggestions received. The Convenor, DUGC then writes to the Chairman, SUGC for approval of the course with two copies of

the proposal in its final form and all the comments/suggestions received. If over 20 percent of the contents get modified in the process, the revised proposal is re-circulated and at least two weeks time given then for the receipt of comments/ suggestions before sending the final version to the Chairman, SUGC for approval.

SUGC can constitute sub-committees to design/ modify core courses. The proposals are then circulated to departments/ interdisciplinary programmes for eliciting their comments/ suggestions and subsequent revision (if necessary) before submitting to the Senate for approval. Similarly, courses of professional curriculum and Humanities and Social Sciences are designed/modified by sub-committees of the concerned department, processed by respective DUGC using the procedure stated above and submitted to SUGC for approval.

Courses of Study

The details of all the approved courses are contained in the **COURSES OF STUDY**, brought out by the Institute periodically.

Discontinuation of a Course

Any undergraduate course, which is not offered for three consecutive years, may be discontinued. The undergraduate office informs the departments/ interdisciplinary programmes about such courses and if a recommendation for their continuation is not received within one month, those are automatically taken off from the list of approved courses. No course is allowed to remain in the list of approved courses for over five years without being offered. The Convener, DUGC may also write to the Chairman, SUGC to remove such courses from the list of the department/ interdisciplinary programme.

Guidelines for Granting Overload Permission

1. A student with $CPI > 8.5$ can be allowed to register for a maximum of 28 credits. The extra credits (beyond 24) will be over and above the requirement of graduation and will not be counted for computation of SPI and CPI.
2. All UG students except the ones who are in AP*/AP/Warning list can register up to 26 credits in a semester where normal load is around 24 credits, that is, during their 5th to 8th semesters, subject to approval of the Convener, DUGC of their departments. A BT-MT (dual degree) student doing M. Tech thesis in a semester will not be given this facility.

Note: The above guidelines are to be strictly adhered to in forwarding the overload request and granting permission.

Relaxation in the Overload Rule for Students who Changed Branch before 26.2.08

The students who got branch change before the present overload rule # 2 mentioned above was implemented (that is, before 26.2.08) might be allowed to take overload up to 28 credits in their 8th semester (applicable to BT and MSc (Int) students) and up to 24 credits in their 8th semester and 20 credits in their 9th and 10th semesters (applicable to BT-MT (dual degree students)) as a special case since they changed branch with the knowledge of the old branch change rules which gave them an impression that they would be graduating on time. For other students, the present overload rule will remain unchanged.

Reservations

1. In each programme 15 percent seats are reserved for the Schedule Caste (SC) candidates and 7.5 percent seats are reserved for the Schedule Tribes (ST) Candidates.
2. Board has approved 27 percent reservation for other backward class (OBC) (other then those covered under the category of creamy layer) in phased manner starting from the admissions for the Academic Year 2008-09, as per the **Office Memorandum (No.1-1/2005-U.1.A/847 dated April 20, 2008)** received from the Ministry of HRD, Government of India. The reservation is applicable to the candidates who satisfies the following eligibility requirements:
 - (a) they belong to one of the castes listed against the State of their residence on the web site of **National Commission of Backward Classes (NCBC)** i.e. they belong to the **central list of OBC** (visit the link <http://ncbc.nic.in/backward-classes/index.html>)
 - (b) they are excluded from the creamy layer as provided in the OM No. 36012/22/93-(SCT) dated 8th Sept., 1993 of the Ministry of Personnel, Public Grievance and Pension, Department of Personnel and Training as amended by that department vide OM No. 36033/3/2004-Estt.(Res) dated 9th March, 2004 and any other notification that may take place before counseling. For more details on definition of Creamy Layer visit the following links.
<http://ncbc.nic.in/html/creamyayer.html>
http://persmin.gov.in/WriteData/WMS/ScanDocument/36033_5_2004_01April2005.htmTo ensure that the benefit of reservation is given only to **OBCs belonging to non-creamy layer** (as per the above mentioned Office Memorandum), candidates belonging to OBC category are required to produce an **original certificate** in the prescribed format (see Annexure 5.1&5.2 at the time of test/admission/counseling/admission).
4. From each category of seats (General and Reserve) ,3 percent of the seats are reserved for the Physically disabled (PD) candidates ,to be filled up as per the admission procedure laid down for that category. In case these seats remain vacant, they are permitted to be filled up by the candidates of that category.
5. Seats for the different categories as approved by the Senate and the Board for the academic year 2008-09 are listed in annexure 5.3

**FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES APPLYING FOR
ADMISSION TO CENTRAL EDUCATION INSTITUTES UNDER THE GOVERNMENT OF INDIA**

This is to certify that Shri/Smt./Kum. _____ Son/Daughter of Shri/Smt.
_____ of Village/Town _____
District/Division _____ in the _____ State belongs to the
_____ Community which is recognized as a backward class under:

- (i) Resolution No. 12011/68/93-BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No. 186 dated 13/09/93.
- (ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
- (iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
- (iv) Resolution No. 12011/96/94-BCC dated 9/03/96.
- (v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96.
- (vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
- (vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
- (viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
- (ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.
- (x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
- (xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 21/09/2000.
- (xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
- (xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
- (xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
- (xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 16/01/2006.

Shri/Smt./Kum. _____ and/or his family ordinarily reside(s) in the
_____ District/Division of _____ State. This is also to
certify that he/she does not belong to the persons/sections (Creamy Layer) mentioned in Column 3 of the
Schedule to the Government of India, Department of Personnel & Training O.M. No. 36012/22/93-
Estt.(SCT) dated 08/09/93 which is modified vide OM No. 36033/3/2004 Estt.(Res.) dated 09/03/2004.

Dated:

District Magistrate/
Deputy Commissioner, etc.

Seal

NOTE:

- (a) The term 'Ordinarily' used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.
- (b) The authorities competent to issue Caste Certificates are indicated below:
 - (i) District Magistrate / Additional Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / Ist Class Stipendiary Magistrate / Sub-Divisional magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner (not below the rank of Ist Class Stipendiary Magistrate).
 - (ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.
 - (iii) Revenue Officer not below the rank of Tehsildar' and
 - (iv) Sub-Divisional Officer of the area where the candidate and / or his family resides.

-X-X-X-X-X-X

Self Declaration cum Undertaking - for OBC Candidates only

I, _____ son/daughter of Shri _____ resident of village/town/city _____ district _____ State _____ hereby declare that I belong to the _____ community which is recognised as a backward class by the Government of India for the purpose of reservation in services (now made applicable to admissions to central educational institutions as well) as per orders contained in Department of Personnel and Training Office Memorandum No.36012/22/93- Estt.(SCT), dated 8/9/1993. It is also declared that I do not belong to persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the above referred Office Memorandum, dated 8/9/1993, which is modified vide Department of Personnel and Training Office Memorandum No.36033/3/2004 Estt.(Res.) dated 9/3/2004.

Place:
Date:

Signature of the Candidate
Name
Reg. No..
Rank.....(AIR)/.....(OBC)

Note: Candidates not signing the self declaration cum undertaking will not be counselled

INDIAN INSTITUTE OF TECHNOLOGY KANPUR
Academic Calendar YYYY

| Events | Second Semester | Summer Term | First Semester |
|--|------------------------|--------------------|-----------------------|
| Registration of I & II Year UG & old PG | | | |
| Registration of other UG, MSc (2-year) and new PG | | | |
| Late registration | | | |
| Classes commence | | | |
| Last date for adding courses for both UG and PG | | | |
| Last date for dropping courses (normal drop) UG PG | | | |
| Last date for dropping courses (special provision for UG only) | | | |
| Last date for documents submission | | | |
| I Mid-semester examination | | | |
| Mid-semester recess | | | |
| II Mid-semester examination | | | |
| Academic pre-registration | | | |
| End semester examination | | | |
| Make-up examination | | | |
| Last date for submission of grades of end semester exam | | | |
| Last date for submission of grades of make-up exams and Conversion of 'I' grades | | | |
| Authentication of grades | | | |
| Vacation | | | |



Indian Institute of Technology, Kanpur
Academic Section : Undergraduate Office

APPLICATION FOR CHANGE OF REGISTRATION

| | |
|--------------------------|------------------|
| Academic Session: | Semester: |
|--------------------------|------------------|

Name: _____ **Roll No:** _____

Programme: _____ **Department:** _____ **Year:** _____

Hall & Room No: _____ **Cellphone No (if relevant):** _____

Whether on AP / DPC: YES / NO (Scratch out the one which is not applicable)

COURSES TO ADD:

| Sl No | Course No | Credits | Title of the Course | Nature* | Taken as [†] | Signature of Instructor |
|-------|-----------|---------|---------------------|---------|-----------------------|-------------------------|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |

COURSES TO DROP:

| Sl No | Course No | Credits | Title of the Course | Nature* | Taken as [†] | Signature of Instructor |
|-------|-----------|---------|---------------------|---------|-----------------------|-------------------------|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |

* Write CORE / HSS / DEL / OEL or PRoFessional as appropriate (3 capital letters only). If an HSS course is taken in OEL slot and not HSS slot, write OEL and not HSS.

† Write FReSh / REPeat / SUBStitute as appropriate (3 capital letters only)

I understand that if it transpires at a later stage that the above change in registration contravenes the academic load or pre-requisite conditions as appropriate, or if there is a time-table clash, my registration will be changed automatically by dropping the respective course(s).

Date: _____ Signature of Student: _____

| | | |
|---|----------------------|--|
| Recommendations of DUGC Convenor (for professional year students only): | | |
| | | _____ Signature of DUGC Convenor |
| FOR OFFICE USE ONLY | | |
| Verification: The student satisfies 1. the academic load requirement 2. the pre-requisite requirement for courses added | YES / NO YES / NO | Permission for ADDING / DROPPING courses as detailed above is GRANTED / NOT GRANTED |
| Remarks: | Remarks: | |

Signature of Dealing Assistant

Signature of Chairman, SUGC



Appendix 3
 Indian Institute of Technology, Kanpur
Academic Section : Undergraduate Office

APPLICATION FOR ACADEMIC OVERLOAD / UNDERLOAD

| | |
|--------------------------|------------------|
| Academic Session: | Semester: |
|--------------------------|------------------|

Name: _____ Roll No: _____

Programme: _____ Department: _____ Year: _____

Hall & Room No: _____ Cellphone No (if relevant): _____

| 1 | | 2 | 3 | | 4 | 5 | 6 |
|--------------------------------------|------------------|--------------------|-----------------------|---------------------|--|--|--|
| SPI in the last two semesters | | Current CPI | No of Backlogs | | Whether listed as WR/AP | Have you taken overload before? | Have you taken underload before? |
| previous | next-to-previous | | Repeat (course nos.) | Fresh (course nos.) | | | |
| | | | | | YES / NO If YES, mention Category: | YES / NO If YES, mention Course nos. | YES / NO If YES, mention Course nos. |

Reasons for seeking Overload / Underload (mark with a tic ✓ as appropriate):

1. Overload is sought to do extra credits which will not count towards CPI/SPI.
2. Underload is sought on account of AP/DPC
3. Underload is sought on medical grounds or as advised by DUGC
4. Any other reason

If you put a tic ✓ on No 6 above, please explain the reason: _____

Date: _____ Signature of Student: _____

Recommendations of DUGC Convenor:

Signature of DUGC Convenor

FOR OFFICE USE ONLY

Verification:

The facts as stated above are
CORRECT / NOT CORRECT
 as per records maintained in the
 Academic Section : Undergraduate Office.

Permission for taking OVERLOAD / UNDERLOAD is GRANTED / NOT GRANTED

Remarks:

Remarks:

Signature of Dealing Assistant

Signature of Chairman, SUGC



Indian Institute of Technology, Kanpur Proposal for a New Course

Course No. :
Course title :
Credits : L-T-D-P-[C]
Semester :
Department/IDP :
Instructor(s) :
Course contents :

Recommended books:

Estimated student enrolment:

Departments to which the proposed course will be of interest:

Other faculty members interested in teaching the proposed course:

Any other remarks:

Dated: _____

Proposer: _____

Dated: _____

DUGC Convener: _____

The course is approved / not approved

Chairman, SUGC

Dated: _____

Application for Make-up Examination

To: The Chairman, SUGC

I have missed the End-Semester Examination in the following course(s) due to the reasons indicated below. I shall be grateful if you could kindly allow me to take the make-up examination.

| No. | Course(s) in which make-up is being sought | | | | Course(s) in which clash of examination occurred (if any) | | | | Make-up is sought on Medical grounds Yes/No* | Period of illness and consulting Medical Officer | |
|-----|--|----------------------|------------------------------------|--|---|----------------------|------------------------------------|--|--|--|--------|
| | Course No. | Instructor-in-charge | Examination held Date Time | | Course No. | Instructor-in-charge | Examination held Date Time | | | Name | Period |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

* If yes, attach a Medical Certificate and give details

(Signature of student)

Name _____ Roll No. _____

Permitted/Not permitted

Department _____ Programme of student _____

CHAIRMAN, SUGC

Academic session _____ Hall _____ Room No. _____



Confidential

Request for Change of Grade

Academic Session _____ Semester: First / Second / Summer Term

Course Number _____ Course Title

Name of Student _____ Roll No.

Original Grade _____ Proposed corrected Grade _____

Reasons for change

(Please attach photocopies of relevant documents)

Name of the Instructor-in-charge: Dr. _____

Signature of **Instructor-in-charge**

Signature of **Convenor, DUGC**

Dated _____

Dated _____

Signature of **Chairman, SUGC**

Signature of **Dean, Academic Affairs**

Dated _____

Dated _____

Approved / Not approved

Signature of **Chairman, Senate**

Dated _____

Note : 1 Request for change of grade be made positively within six weeks of the start of the next semester.
2 No information about the recommendation of the change of grade be given to the concerned student.