

# ACADEMIC PROGRAMMES

## Rules & Regulations

(For Students enrolled from July 2019 onwards)



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**Indian Institute of Technology Jodhpur**

## **1. INTRODUCTION**

Academic programmes at Indian Institute of Technology, Jodhpur are designed to develop the highest calibre human resource capable of understanding the new patterns of knowledge creation across disciplines obliterating traditional boundaries between science, humanities, social sciences and engineering. IIT Jodhpur aims to produce quality professionals who would be able to address profound and wide-ranging societal challenges of the 21st century such as energy, food, water, housing, mobility, and health. In addition to imparting scientific knowledge, IIT Jodhpur endeavours to inculcate human qualities of courage, integrity, fairness, humility and team effort among its graduates through curricular, co-curricular and extra-curricular activities on campus.

The undergraduate academic programmes focus on developing a temper for the life long process of learning, creative thinking and exploring. The postgraduate academic programmes focus on developing a deep understanding of the subject of study coupled with creative inquisitiveness and the ability to address and solve new problems with a free and objective mind.

The academic programmes are based on three tenets of (1) semester system, (2) Credit System and (3) Relative Grading. These academic programmes are administered by a duly constituted Academic Committee (AC) through the office of Academics. The AC will be chaired by Dean (Academics). In the absence of Dean (Academics), Associate Dean (Academics-PG)/Associate Dean (Academics-UG) will discharge the responsibilities of Dean (Academics).

The Senate of the Institute has formulated a set of guidelines and rules to ensure a high standard of performance as well as for smooth functioning of the academic programmes. Within this broad set of guidelines, subject to the approval of Senate, different programmes can include additional academic requirements as deemed necessary for that programme. These academic programmes are continuously monitored by the Senate and make appropriate modifications/ improvements as and when necessary.

## **2. ACADEMIC SESSION**

The academic session normally runs from the end of July in one year to the middle of July in the next year. The academic session is divided into three parts: two regular semesters and a summer term as per the following timelines:

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.

Excluding the days of the examinations, the total number of days of instruction in a semester is at least 70.

### **2.1 Academic Calendar**

The academic calendar gives the exact dates of all important events during the Academic Session, such as orientation, registration, the commencement of classes, adding and dropping of courses, submission of documents, examinations, submission of grades, project evaluation, declaration of results, mid-semester recess, and vacation. This calendar is approved by the Senate.

### 3. REGISTRATION

**a. Registration:** Students are required to register for prescribed credits as per the programme, on the dates specified in the Academic Calendar. If the student does not register by the date of registration, she/he can register by paying the fine and register before the date of late registration.

**b. Provisional Registration:** A fresh student joining the Institute, who is awaiting the final results of the qualifying examination, is allowed to register provisionally on submission of a certificate from her/his last Institute stating that she/he has appeared in the final examination of the qualifying degree. The student is required to submit documents of having passed the qualifying examination by the last date given in the Academic Calendar for the registration to be regularized.

**c. Late Registration:** If the student does not register by the date of late registration as mentioned in the Academic Calendar, he/she will be deregistered. The appeal against deregistration may be made to Chairman, Senate through Dean Academics. Chairman Senate may permit the continuation of registration on payment of an appropriate fine.

**d. Adding and Dropping of Courses:** A student may add or drop course(s) with approval of the Faculty advisor till the last date of registration.

**e. Withdrawing from a Course:** After the last date of add-drop, a student will have the option of withdrawing from a course. The last date of course withdrawal will be typically within four weeks from the beginning of the Semester as specified in the academic calendar. The withdrawn course will be mentioned in the Student's grade card with a letter grade 'W'.

**f. Cancellation of Semester 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.

**g. Summer course registration:** A department may offer summer courses to enable the students to clear their backlog courses and/or regular credit courses. A course will run during summer provided a faculty member(s) is available for running the course. The course is offered on approval of the Dean.

### 4. TEACHING AND EVALUATION

#### 4.1 Teaching

##### 4.1.1 Medium of Instruction

The medium of instruction is English.

##### 4.1.2 Course Structure

All courses have associated credits. Credits of a course are based on the number of contact hours for lectures, tutorials, and practicals. A student on successful completion of the course with a passing grade will earn an equivalent number of credits. Based on the required academic maturity level of students for attending a course, a course is assigned a level. A course can consist of independent components which can be completed independently. These components are called fractals. A course is identified by a unique number. Following tables define all parameters related to course numbering scheme.

**Table 4.1** Course Code Description

<b>Course Code</b>	<b>M</b>	<b>E</b>	<b>L</b>	<b>1</b>	<b>X</b>	<b>X</b>	<b>1</b>
<b>Descriptions</b>	Offering Department/IDRP		Course Type	Level of Courses	Unique Identification Number		Indicates Fractal
<b>Categories</b>	See Table 4.2		See Table 4.3	See Table 4.4	This code will be given centrally by the office of academics		0: Regular 1: Fractal 1 2: Fractal 2 3: Fractal 3

**Note:** Examples of course codes

	<b>Course Title</b>	<b>L-T-P</b>	<b>Course Code</b>
Regular Course	Engineering Mechanics	2-1-0	MEL1XX0
Fractal Course	Robotics	3-0-2	MEL7XX0
	Fractal 1: Robot Modelling	1-0-0	MEL7XX1
	Fractal 2: Motion Planning and Programming	1-0-0	MEL7XX2
	Fractal 3: Robot Control	1-0-0	MEL7XX3

**Table 4.2** Departmental Code

<b>S. N.</b>	<b>Type</b>	<b>Department/Platform/Office</b>
Department		
1	ME	Mechanical Engineering
2	CS	Computer Science and Engineering
3	EE	Electrical Engineering
4	CI	Civil and Infrastructure Engineering
5	CH	Chemical Engineering
6	BB	Bioscience and Bioengineering
7	MT	Metallurgical & Materials Engineering
8	CY	Chemistry
9	MA	Mathematics
10	PH	Physics
11	HS	Humanities and Social Science
Interdisciplinary Research Platforms (IDRPs)		
12	DH	Digital Humanities
13	SS	Space Science and Technology
14	IO	Internet of Things and Applications
15	AV	Autonomous unmanned vehicles (AUV)
16	QC	Quantum Information and Computation
17	CG	Cognitive Science
18	SH	Smart Healthcare
Others		
19	OA	Office of Academics
20	OS	Office of Students

**Table 4.3** Types for Courses

S. N.	Course Type	Category
1	L	Lecture courses (other than lecture hours, these courses can have Tutorial and Practical hours, e.g. L-T-P Structures 3-0-0, 3-1-2, 3-0-2, 2-0-0, etc.)
2	P	Practical / Practice-based courses (where performance is evaluated primarily on the basis of practice, practical or laboratory work with LTP structures such as 0-0-3, 0-0-4, 1-0-3, 0-1-3, etc.)
3	D	Project-based courses (e.g. Major, Minor, Mini Projects)
4	N	Non-graded core component
5	T	Thesis
6	Q	Seminar Courses
7	S	Independent Study
8	R	Engineering innovation
9	E	Engineering Design (Graded and Non-Graded)

**Table 4.4** Level of Courses, category and credit requirements

S. N.	Level	Category	Credit Requirements
1	100	Courses for B.Tech. Programmes	B.Tech. (Cr>=0)
2	200		
3	300		B.Tech. (Cr>=38)
4	400		B.Tech. (Cr>=75)
5	500	<b>Preparatory</b> Courses of M.Sc. and M.Tech. Programmes (NOT open to B.Tech. and B.Tech. + M.Tech. Dual Degree)	M.Tech. (Cr=0) M. Sc. (Cr=0)
6	600	Courses for M.Sc. programmes	B.Tech. (Cr>=75) M.Sc. (Cr>=0) M.Tech. (Cr >= 0)
7	700	Courses for M.Tech. programmes	B.Tech. (Cr>=100)
		Advanced courses for M.Sc.	M.Sc. (Cr >=30) M.Tech. (Cr>=0) Ph.D. (Cr>=0)
8	800	Advanced courses for M.Tech. and Ph.D. programmes, An 800 level course should have 700 level course as a pre-requisite	M.Tech. (Cr>=14) Ph.D. (Cr>=0)

**4.1.3 Approval of Courses**

The Senate approves each course along with its weight in terms of credits. Only the approved courses may be offered during any semester/summer term.

**4.1.4 List of Courses**

The list of courses to be offered in a Program is finalized before the beginning of the semester, by the Department hosting that Program.

**4.1.5 Categories of Courses**

Courses offered can be from one of the following categories:

**a) Regular course:**

A regular course has 14 hours of classroom engagement per one credit. A regular course can be under elective or core/compulsory categories.

Elective courses of 100, 200, 300, 400, 500, or 600, level will run if a minimum of 10 students registers for the course. A 700 or 800 level elective course can run with a minimum of 5 registered students. A course not running as a regular course may be offered as a self-study course as per the following section.

### **b) Self-study Course**

A self-study course will be from the list of courses approved by Senate. The main features of a self-study course are as follows:

- A student may be allowed to register for an elective course as a self-study course provided that the course is not running in that semester as a regular course or a student is not on campus during the course with prior approval of the competent authority.
- A student may also be permitted to register for a core or program compulsory course in self-study mode provided he/she has failed in it earlier and the course is not being offered as a regular course during that semester or a student is not on campus during the course with prior approval of the competent authority.
- Students should apply for a self-study course with the appropriate recommendation of a Course Coordinator and DUGC/DRC/IRC. The final sanction of a self-study course to a student is made by the Dean (Academics).
- Formal classroom engagement may not be there for a self-study course but laboratory, design and computation exercises will be conducted if they form an integral part of the course.
- The Course Coordinator conducts the assessment as per the evaluation norms for the award of letter grade at the end of the semester.
- A self-study course will appear with the approved course title on the transcript.
- Not exceeding 10% of the total graded credit can be opted as a self-study course.

### **c) Independent Study Course**

Independent study enables a student to pursue course credit on an academic topic of interest under the supervision of a faculty member. The term independent does not mean not involving an Instructor but independent of regular class engagement. Self-disciplined and having a sense of own direction and goals are fundamental requirements of an Independent Study course. A student having CGPA more than or equal to 6.0 can opt for Independent Study courses with the recommendation of Supervising Professor. The main features of an independent-study course are as follows:

- A student may be permitted to register for a topic of interest as an independent-study course not exceeding 3 credits in self-study mode at most once during the program. Such independent study course will be counted toward open elective requirements of the program and will appear with the title "Independent Study" on the transcript.
- Students should apply for an independent study course with the appropriate recommendation of a Course Coordinator and DUGC/DRC/IRC. The final sanction of an independent-study course to a student is made by the Dean (Academics).
- Normally, no formal lectures will be held for an Independent Study course but laboratory, design and computation exercises will be conducted if they form an integral part of the course.
- The course will be arranged, planned and managed by a supervising professor. The Course Coordinator conducts the assessment as per the evaluation norms for the award of letter grade at the end of the semester.

#### **4.1.6 Conduct of Courses**

Each course is conducted by the Instructor with the assistance of the required number of tutors, as needed. The Instructor is responsible for conducting the course, evaluating the performance

of students, awarding the grades at the end of the semester, and transmitting the grades as per Subsection 5.2.

The student shall have access to his/her answer paper(s) of all the written examinations conducted for a given course, which may be shown to him/her by the Instructor(s) concerned. The instructor must keep all evaluation records in his custody at least for the next six months.

A course approved by the senate of IIT Jodhpur can be conducted through either (i) direct contact (ii) synchronized remote contact (iii) guided study mode or combination of these. In direct contact mode, coordinator or instructor will have a face to face physical interaction with the students. Synchronized remote contact mode would require the faculty and/or the students to be concurrently connected to the classroom interaction via electronic conferencing involving both audio and video communication. However, there has to be direct interaction between faculty and students for limited hours (typically 25%) of the stipulated contact hours. In guided study mode, a faculty would guide a single or a group of students to take up the study of an approved course via self-learning and discussion-oriented contact sessions. This mode can be also adopted for enabling a student to take up study of a new course, not yet approved by the Senate, under the supervision of a faculty. All formal evaluation component applicable to courses being run through any one of the above-mentioned modes will be conducted under direct physical supervision of a faculty. All laboratory component of a course requiring the use of the specialized facility will be conducted through direct contact.

#### **4.1.7 Teaching Assignments**

The instructors and tutors for all courses to be offered during the semester are allocated by the Head of the Department hosting the Program. When faculty members of other Departments are also required to participate in teaching a particular course, the allocation shall be done in consultation with the Head of that Department.

#### **4.1.8 Auditing of Courses**

A student may audit a course in addition to the prescribed academic load requirement with the permission of Dean (Academics) on the recommendations of Instructor of the course being audited and the Faculty Advisor. Under this arrangement, the course will be listed in the Grade Card of the student.

#### **4.1.9 Attendance Requirements**

A student should have full attendance in each course. Unless the student takes leave of absence for valid reasons, the student has to attend every lecture, tutorial, or lab session. The attendance records must be made available to the student after every lecture. Even if the student's attendance falls below 75%, the student will be allowed to appear for the exams. Students not meeting the attendance criterion of 75% will be required to score at least C grade to pass a course. These students would be awarded F grade if their marks are lower than the cut-off for C grade in a course.

### **4.2 Evaluation**

The performance of students in a course is evaluated continuously, using their interaction in the classroom, and performances in examinations, the laboratory work (if any), and term-papers and projects.

The performance of students in a course is evaluated through examinations and on a continuous basis. The Senate will decide from time to time on the system of tests and examinations in each subject in each semester.

- Minor 1, Minor 2 and Major examinations are mandatory components of the evaluation of a regular 14-week long lecture course. The minor examinations shall be of 60 minutes duration and the major examination of 120 minutes. Fractal courses (less than 3 credits) must have at least one examination.
- The total weightage of examination component (three examinations for a 14 week-long course) shall be between 40% to 60% of the total weightage of evaluation measure.
- Evaluation policy has to be known from the first day of the class.
- The continuous evaluation may include but not limited to interaction in the classroom, quizzes, assignments, tutorials, laboratory work, term papers and projects.

## 5. GRADING SYSTEM

### 5.1 Letter Grades

At the end of the semester, a student is awarded a relative letter grade in each course by the Instructor offering the course considering the performance of the student during the semester with respect to those of the other students registered in the course. It is proposed that ten regular letter grades, namely A\*, A, A-, B, B-, C, C-, D, E and F shall be awarded in each course. Each letter grade is associated with a numerical equivalent on a 10-point scale shown in Table 5.1. In addition, there are four special letter grades, namely, I, S, X and U, which stand for Incomplete, Satisfactory, Thesis Continuation and Unsatisfactory, respectively. The faculty member shall upload grade on the portal as per the stipulated time schedule.

**Table 5.1** Letter grade and its equivalent grade points

S.N.	Letter Grade	Grade Points	Comment
1	A*	10	Exceptional
2	A	10	Outstanding
3	A-	9	Excellent
4	B	8	Very Good
5	B-	7	Good
6	C	6	Average
7	C-	5	Below Average
8	D	4	Marginal
9	E	2	Poor
10	F	0	Fail
11	I	Incomplete	
12	S	Satisfactory in Course	
13	X	Thesis Continuation	
14	U	Unsatisfactory	
15	W	Withdrawn	

A detailed description of some of the grades is given below:

S.N.	Grades	Description
1	A*	'A*' grade has the same grade point as 'A' grade. The grade 'A*' indicates exceptional performance and is awarded only in the Course/(s) in which the number of registered students is more than 50. It should not exceed 2 % of the total strength of the particular theory or lab course. The grade 'A*' is not awarded for projects /seminars.



2	E	'E' Grade will be awarded to a student who has scored marks less than the cutoff marks for 'D' Grade and has met the attendance criterion of the institute. Students who obtain an 'E' Grade will be eligible to appear in an additional examination. If they perform satisfactorily, they become eligible for getting the 'E' grade converted to a 'D' Grade, otherwise, they will continue to have 'E' Grade. The student will have only one chance to appear for the additional examination for an 'E' Grade. The additional examination will be conducted within the first week of the next semester. The date of additional examination of Institute core courses for undergraduate students centrally notified, while for all other courses, the date would be announced by the respective course coordinators. A student can appear for a maximum of three such additional tests in a given semester. If a student cannot appear for the test due to any reason(s), he/she will not get any additional chance. If a student with 'E' grade in a course does not pass the course through the additional test, or obtains an 'F' grade in the course, he/she has to repeat the course if it is a core course. In case the course is elective, the student may take the same course again or any other course. 'E' and 'F' Grades are not counted in the calculation of the CGPA; however, these are taken into account in the calculation of the SGPA.
3	I	An 'I' grade is temporarily awarded to a student on his/her request to denote incomplete performance in a course on approval of instructor. An 'I' grade is awarded in case missing an evaluation component due to absence on medical grounds or other special circumstances. Requests for 'I' grade should be made at the earliest but not later than the last day of major tests. All evaluation requirements for such students in the corresponding course(s) should be completed before the end of the first week of the next semester. Upon completion of all course requirements, the 'I' grade is converted to a regular grade.
4	S	This grade is awarded to a student with satisfactory performance in non-graded and Audit courses. If the stipulated requirements are not fulfilled, the unsatisfactory (U) grade is awarded. The grades obtained in an audit course are not considered in the calculation of SGPA or CGPA.
5	X	This grade is awarded to a student with satisfactory performance in thesis for continuation
6	U	This grade is awarded to a student with unsatisfactory performance in thesis, audit or non-graded courses.
7	W	This grade is awarded to a student who has opted to withdraw from a course. Withdrawal from a course is permitted until the date specified in the Academics Calendar.

## 5.2 Procedure for declaration of results

The following procedure would be followed for declaration of results and timeline would be as per Academic Calendar.

1. Evaluation scheme to be displayed by instructors at the start of a semester:
2. Display of answer sheets and all scores by instructors.
3. Finalization of grades by instructors
4. Grade moderation by department/institute level committee for department/institute-wide courses

5. Recommendation of grades by the Head of the Department after scrutiny of grades by a moderation committee
6. Display of grades by Instructors
7. Grade correction, if any, within 48 hours of display of grades after approval of the head of the department
8. Approval of Grade by the Dean (UG/PG)
9. Finalization of results by the Dean (UG/PG)
10. Approval of results by the Chairman Senate
11. Results once approved cannot be changed under any circumstance. In exceptional cases, the student may appeal to the Chairman, Senate for reconsideration, with formal justification.

### **5.3 Grade Point Averages**

#### **5.3.1 Semester Grade Point Average**

The Semester Grade Point Average (SGPA) is a weighted average of the grades earned by a student in all the courses credited by her/him and reflects her/his academic performance in the respective semester. If the grade points associated with the letter grades earned by a student in N courses registered during a semester are  $G_1, G_2, \dots, G_N$ , and the corresponding credits  $C_1, C_2, \dots, C_N$ , then the SGPA is given by the following formula:

$$SGPA = \frac{C_1G_1 + C_2G_2 + \dots + C_NG_N}{C_1 + C_2 + \dots + C_N}$$

The SGPA is calculated on the basis of grades obtained in all courses, except audit courses and courses in which S/X grade is awarded, registered in a particular semester.

#### **5.3.2 Cumulative Grade Point Average**

The Cumulative Grade Point Average (CGPA) indicates the overall academic performance of a student in all the courses registered up to the latest completed semester. The CGPA is computed similarly as the SGPA, considering all the courses in all semesters. The CGPA is calculated on the basis of all pass grades (A\*, A, A-, B, B-, C, C-, D), except audit courses and courses in which S/X grade is awarded, obtained in all completed semesters.

The SGPA and CGPA calculation are based on credits earned/completed at IIT Jodhpur alone.

## **6. GRADE CARD AND TRANSCRIPT**

A Grade Card shall be issued to each student at the end of each semester, and a Transcript at the end of the Programme. IIT Jodhpur Grade Card and Transcript will only indicate the courses, credits and grades completed at IIT Jodhpur and the total number of credits (without grades) earned in other academic institutions in a particular semester, if applicable.

## **7. WAIVER OF REQUIREMENTS IN SPECIAL CASES**

The rules and regulations procedures and requirements stated in this manual, other than those related to Admissions to the academic programmes, may be waived in special circumstances by the AC on the recommendation of the Department with the approval of Chairman, Senate. All such exceptions have to be reported to the Senate.

## **8. MAKE-UP EXAMINATIONS**

A student who has missed minor(s) or the major examination due to genuine reasons like illness etc. may be permitted to write a make-up examination for the missed components. The student should make an application to the Dean (Academics) through the course instructor within ten days from the date of the examination missed, explaining the reasons for their absence. Applications received after this period need not be entertained. The permission to take a make-up examination will be given under exceptional circumstances such as admission to a hospital due to illness. A student needs to produce the necessary document subject to one of the following categories:

- Students residing in the Hostels should produce a Medical Certificate issued by the Medical Officer of the Institute that he/she was admitted to the Hospital during the period of the missed quiz/exam.
- Students residing in the Hostels and taking medical consultation with outside Doctors are required to obtain written permission from the Medical Officer of the Institute Hospital before they proceed for such consultation.
- Students residing in the hostels but taking medical consultation with outside Doctors are required to obtain an endorsement on the certificate of treatment by the Medical Officer of the Institute Hospital.
- A student staying outside the Campus permanently / temporarily must produce a medical certificate from the Registered Medical Practitioner and the same should be duly endorsed by the parent/guardian.

A slot-wise make-up examination for major will be held during the makeup / supplementary week as per Academic Calendar of the subsequent semester for those who are permitted to take the make-up examination. A student who misses this make-up examination will not normally be given another make-up examination. However, in exceptional cases of prolonged illness resulting in the student missing a make-up examination, the Chairman of the Senate, in consultation with the Dean of Academics may permit the student to appear for make-up examination any day before the end of the first week of the next semester. Under no circumstances, prorating can be done for the missed examinations or attendance.



## **A. REGULATIONS FOR UNDERGRADUATE PROGRAMMES**

## **9. UNDERGRADUATE PROGRAMMES**

IIT Jodhpur currently offers Bachelor of Technology (B. Tech.) programs, and capability linked opportunities for undergraduate students to complete Minor/Interdisciplinary Area Specializations or Department Area Specialization. A student can also opt for M.Tech.(dual degree) in Departmental Area or Minor in Entrepreneurship leading to M.Tech. in Entrepreneurship or Department Area Specialization in Engineering innovation.

## **10. UNDERGRADUATE ADMISSIONS**

### **10.1 B.Tech. Programmes**

#### **10.1.1 General Admissions**

Admissions to the B.Tech. Programmes are made once a year in July through the all-India level Joint Entrance Examination (JEE) conducted by IITs. The procedures and other requirements for admission are specified in the JEE Information Brochure brought out every year.

#### **10.1.2 Cultural Exchange Programmes**

Admissions are also offered to foreign nationals under the Cultural Exchange Fellowship Program of the Government of India, administered by Indian Council of Cultural Relations (ICCR), New Delhi. Persons interested in these programs are required to apply through the Indian High Commission/Embassy in their respective countries.

#### **10.1.3 Change/Enhancement of Program**

A student already admitted to a B.Tech. programme may switch to another department through branch change. A student can enhance his/her programme to a Minor/Interdisciplinary Area Specialization leading to M. Tech. in Minor/Interdisciplinary Area, Major/Department Area Specialization leading to M. Tech. in Department Area, Minor in Entrepreneurship, Minor in Entrepreneurship leading to M. Tech. in Entrepreneurship and Department Area Specialization in Engineering innovation (through Industrial Translation). The rules governing these changes are given in Section 18 (branch change) and Section 11.2 (for all others).

### **10.2 Reservation Policy**

The reservation policy of Government of India will be followed.

### **10.3 Student Exchange Program**

Student Exchange Program provides for a one/two-semester visit by students between the two academic institutions on a reciprocal basis. The visiting student must be a full-time student enrolled in a degree program in their Home Institution. The exchange program is open to full-time undergraduate and graduate students of each Home Institution. It will be executed as per the pre-approved arrangement (including an MoU) between the institutions.

Selection of students under such program will be made by the DUGC after assessing the preparedness of students to meet the requirements of the planned coursework/research at the Host Institution and the relevance of the planned coursework/research to the enrolled degree program. A visiting student may carry out research or take courses for credit or otherwise or may use other academic facilities as per pre-approved arrangement (including an MoU).

Under exchange program, a student of IIT Jodhpur can register at another academic institution in India or abroad with the expectation of credit transfer up to 20 credits per semester in lieu of the course work or research work through a pre-approved arrangement including an MoU.

On return, the student may apply to DUGC for waiver of credits from her/his program requirements which s/he thinks are equivalent to the courses successfully completed at the visited academic institution as an exchange student. With the application, the student must submit an official transcript of the grades obtained by her/him at the visited academic institution as an exchange 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 credits requirements for which the student may be given a waiver in her/his programme at IIT Jodhpur. DUGC will submit its recommendations to course equivalence committee for its approval. Moreover,

- The credits/grades indicated in the grade sheet obtained from the academic institution in which the student has completed the courses should be used by the student as part of his/her transcripts.
- IIT Jodhpur transcripts will only indicate the courses, credits and grades completed at IIT Jodhpur and the total number of credits (without grades) earned in other academic institutions in a particular semester.
- The CGPA calculation based on credits earned/completed at IIT Jodhpur alone is to be considered for award of prizes.
- The credits earned at the visited academic institutions will be taken into account for the calculation of minimum required credits for the award of the degree.

#### **10.4 Visiting Students**

A visiting student is a student who is registered for a degree in a recognized institute or university in India or abroad, and who is officially permitted by that institute or university to complete part of his/her academic requirements at IIT Jodhpur. For that purpose, the visiting student may carry out research or take courses for credit or otherwise or may use other academic facilities.

A person can be admitted as a visiting student on a duly sponsored application to the Dean (Academics). A visiting student may be admitted for a maximum period of one year. A visiting student will be required to pay all applicable fees depending upon the status, Program, and nationality.

Students so admitted also will be governed by all rules, regulations, and discipline applicable to regular students of the Institute.

#### **10.5 Cancellation of Admission**

Students admitted provisionally or otherwise to any Program shall submit copies of their mark sheets, provisional certificates, etc. of the qualifying examination and other documents by the last date specified for the purpose in the Academic Calendar. The Senate reserves the right to cancel the admission of any student, who fails to submit the prescribed documents by the specified date or to meet other stipulated requirement(s). Also, the Senate reserves the right to cancel the admission at any later time, if it is found that the student had provided some false information or suppressed relevant information while seeking admission.

#### **10.6 Fulfillment of Admission Requirements**

Admission to any undergraduate Program requires that the applicant be eligible, go through the laid-down admission procedure, and pay the prescribed fees. The Senate should formally approve all admissions to the Undergraduate Programmes.

# 11. CURRICULUM AND ACADEMIC REQUIREMENTS

## 11.1 Academic Load & Calculation of Credits for a Course for UG Programmes

The total credits for a course are calculated by taking into account the number of lectures, tutorial, and practical hours (L-T-P) assigned as given in Table 11.1. Each credit is associated with the number of contact hours and the expected number of self-learning hours (on an average) to be spent by the student for each contact hour to meet academic demand of the course.

**Table 11.1** LTP-structure and credit assignment.

Type	L-T-P	Distribution of contact and beyond contact Hours <sup>#</sup>			Total Credits (TC=TH/3)
		Contact Hours (CH)	Beyond Contact Hours (BCH)	Total Hours (TH)	
1 hour of Lecture	1-0-0	1	2	3	1
1 hour of Tutorial	0-1-0	1	2	3	1
1 hour of Lab	0-0-1	1	0.5	1.5	0.5
1 hour of Project#	0-0-1	1	2	3	1

<sup>#</sup>Contact hour for project refers to the involvement of students in the laboratory, discussion, etc.

## 11.2 Capability Linked Opportunities for Undergraduate Students

A B.Tech. student can opt for one of the following capabilities Linked Opportunities

- 1) Major/Department Specialization
- 2) Interdisciplinary Specialization
- 3) Minor
- 4) B.Tech. + M.Tech. Dual Degree

### 11.2.1 Eligibility Criteria for opting

#### (a) Major/Department Specialization, Minor/Interdisciplinary Specialization

A student should have earned a minimum 100 credits with the CGPA more than or equal to 6.0 at the end on 6<sup>th</sup> semester to opt for capability linked opportunity.

#### (b) B.Tech. + M.Tech. Dual Degree in the chosen specialization

Students who have already opted for Major/Department Specialization, Minor/Interdisciplinary Specialization can opt for dual-degree Programme from the eighth semester provided they have earned minimum 134 Credits with at least 6 CGPA at the end of the 7th semester.

### 11.2.2 Minimum Credit requirements

#### (a) Major/Department Specialization, Interdisciplinary Specialization and Minor

A student needs to complete a total of 20 Credits in the Major/Department Specialization or Minor/Interdisciplinary Specialization area offered. 10 Credits out of 20 can be taken up as a part of Open electives whereas the student is required to opt for an additional 10 credits in the form of course overload. This will be indicated on the degree.

*Registration for Additional Courses for Major/Department Specialization, Interdisciplinary Specialization and Minor*



Starting from the sixth semester, students having earned 80 credits with CGPA more than or equal to 6.0 are permitted to take up to 4 extra Credits as part of their normal load, which forms part of her/his additional learning component, every semester in addition to the prescribed courses for their degree.

### (b) B.Tech. + M.Tech. Dual Degree in the chosen specialization

A student needs to complete a total of 56 Credits in the Minor, Department, or Interdisciplinary area offered. It will include credits earned for Major/Department or Minor/ Interdisciplinary area Specialization excluding the project credits.

## 11.3 Course Categories and Academic requirements for various programmes

Course Categories and Academic requirements for various programmes are given in the table below:

**Table 11.2** Course Categories and Academic requirements

S.N	Course Type	Course Category	B.Tech. Regular	B.Tech. with Specialization	Dual Degree
1	Institute Core (I)	Engineering (IE)	34	34	34
		Science (IS)	16	16	16
		Humanities (IH)	12	12	12
2	Programme Linked (L)	Science (LS)	7	7	7
3	Programme Core (P)	Programme Compulsory (PC)	50	50	50
		Programme Electives (PE)	18	18	18
		B.Tech. Project (PP)	3	3	3
4	Open (O)	Electives (OE)	10	0	0
5	Specialization (Major/Minor/Department/ Interdisciplinary) (S)	Compulsory (SC)	0	8	8
		Elective (SE)	0	12	12#
6	M.Tech. (M) in Minor, Department, or Interdisciplinary Area	Compulsory (MC)	0	0	9
		Electives (ME)	0	0	5
		Project (MP)	0	0	16
		Open Electives (MO)	0	0	6
<b>Total Graded</b>			<b>150</b>	<b>160</b>	<b>196</b>
7	Non-Graded (N)	Humanities (NH)	6	6	6
		Engineering (NE)	3	3	3
		Design/Practical Experience (ND)	6	6	6
<b>Total Graded+Non Graded</b>			<b>165</b>	<b>175</b>	<b>211</b>

# Must not include any project course

### 11.4 Maximum Duration of the Program

The maximum duration for the completion B.Tech. Programs shall be 14 registered semesters.

### 11.5 Academic Performance Requirements

The minimum requirements on credits earned for continuation in a B. Tech. Programme at the end of the second registered semester is specified in the following table:

**Table 11.3** Criteria for continuation at the end of the second registered semester

Description	Minimum number of credits to be earned	
	GEN/OBC/GEN-EWS	SC/ST/PD
Minimum for Continuation	18	14

If a student does not meet the criteria specified in Table 11.3, he/she may opt to restart the programme or else their registration will be terminated. The restart will be permitted only once. Dean (UG/PG) should propose a guideline for mentoring the student under probation. Dean of Students should also involve in the process.

If a student chooses to restart after the first two registered semesters, then the credits earned and semesters registered till that point will not be counted towards the graduation requirements. The re-start will be indicated on the transcript.

#### **11.5.1 Criteria to put a student on Academic Probation:**

- From the third semester onward if a student fails to earn a minimum of 12 credits in any registered semester, then he/she will be placed on academic probation.
- A student placed on probation shall be monitored, including mandatory attendance in classes, special tutorials and mentoring. Mentoring would comprise structured guidance under a senior student.
- If a student is on academic probation for two consecutive registered semesters, then his/her registration will be terminated.
- If a student earns less than or equal to 15 credits in any registered semester a warning shall be given to him/her and intimation be sent to the parents.
- The two semesters allowed for the academic probation should be counted towards the total duration allowed for the program.

#### **11.6 Assistantship for B.Tech. -M. Tech. Dual-degree Programmes**

The students of dual-degree programmes will be considered for award of institute research/teaching assistantship if they have earned 150 credits by the end of the eighth semester. Only those students who have either qualified GATE or have a CGPA more than 8.0 will be eligible for this assistantship. The assistantship will be provided for a maximum period of 14 months beginning from the summer semester following the eighth semester, provided the student is registered for M.Tech. Major Project in that semester. A student availing assistantship will be required to provide 8 hours of assistance per week besides his/ her normal academic work. For continuation of assistantship, a student will need to secure SGPA of 6.5.

A student receiving assistantship will be eligible for a total of 30 days leave during the 14-month period. He/she will not be entitled to mid-semester breaks, winter and summer vacations.

## **12. UG REGISTRATION**

### **12.1 Summer Courses**

Students can register for courses during summer up to a maximum of Eight Credits on payment of registration fee at prescribed rates. The summer term is not a regular semester and only academically deficient students (who have low CGPA and/or fewer credits than advised by the curriculum till that point in the programme), Major students, Minor students, and such students

who are short of maximum Eight Credits to complete all graduation requirements may register during this period.

For core courses, only students with failed backlog may be considered for summer registration. In case any vacancies are left in the courses being offered during the summer term once the requirements of the above categories of students are fulfilled, other students may register for these courses to fulfil some of their graduation requirements in advance.

The total number of contact hours for the courses remains the same as that during the regular semesters, and therefore the courses run at an accelerated pace. The evaluation and grading patterns also remain the same as during the regular semesters.

## **12.2 Limits on Registration**

- An undergraduate student should register for a minimum of 12 credits in a semester.
- The maximum number of credits permitted for a UG student in a semester is 25.
- An undergraduate student may be permitted to register for a maximum of four credits per semester for independent-study or self-study course

## **12.3 Exceptions to Regular Rules regarding Academic Load**

**Under-load:** Students who are identified as academically deficient (on academic probation) may register for a maximum of 16 credits.

**Over-load:** Overloading may be allowed only for students who are not on academic probation and satisfy one of the following criteria:

- Students are allowed to overload only when they need 70 or less additional credits to complete all the requirements of their programme.
- Beyond the second semester, any student with a CGPA of 7.5 or higher may be allowed to overload.

## **12.4 Change of Registration from B. Tech. Programme to B.Tech.- M. Tech. dual degree Programme**

A B.Tech. student having opted for major/minor specialization with CGPA 6 or more at the end of the seventh semester and fulfilling requirements mentioned earlier may be allowed to switch to B.Tech.- M. Tech. dual degree program in the chosen specialization at the beginning of the eighth semester. The M.Tech degree can be any one of the approved programmes of the institute. All requirements of M.Tech. Degree will be applicable to all such students. All such changes of registration shall be reported to the Senate.

# **13. EVALUATION OF SPECIAL UG ONLY COURSES**

## **13.1 B.Tech. Project Evaluation**

- DUGC will appoint a committee for B.Tech. Project evaluation. The committee will ensure that Award of letter grade would be as per relative grading policy.
- The evaluation will be based on the report and a viva-voce examination on the project.
- DUGC will form the evaluation criterion and declare it to students.

### **13.2 Composition of Department Undergraduate Committee (DUGC)**

- The DUGC will be constituted of all UG Faculty Advisors and Head of Department. The Head of Department will be the chairperson and one of the faculty advisors would be the convenor.

### **13.2 Engineering Innovation**

- At the completion of an Engineering Innovation Project the student will submit a report which will be evaluated by duly appointed examiner(s) by DUGC.
- The evaluation will be based on the report and a viva-voce examination on the project/ Entrepreneurship and a letter grade is awarded.
- Evaluation policy has to be declared by the concerned department from the first day of the class.

### **13.3 Design Project Evaluation**

- At the completion of a project, the student will submit a project report which will be evaluated by duly appointed examiner(s) by DUGC.
- The evaluation will be based on the report and a viva-voce examination on the project and S or U grade is awarded.
- Evaluation policy has to be declared by the concerned department from the first day of the class.

### **13.4 Conduct and Evaluation of B.Tech. -M. Tech Dual Degree Project**

- Allotment of students to supervisors will be made based on the preferences of the students and supervisor(s).
- The supervisor and area identification must be completed by the end of the eighth semester.
- Coordinator, M. Tech. Program would advise until the student is assigned to a regular supervisor(s).
- The evaluation criterion would be the same as Section 25.

### **13.5 Entrepreneurship Project**

- At the completion of Entrepreneurship, the student will submit a report which will be evaluated by duly appointed examiner(s) by Dean (Academics-UG)/Associate Dean (Academics-UG).
- The evaluation will be based on the report and a viva-voce examination on the Entrepreneurship and a letter grade is awarded.

## **14. TERMINATION**

### **14.1 Termination from B.Tech. Program**

A student may be terminated from the B.Tech. Programme by AC, if the student

- (a) Is absent without authorized leave of absence for eight weeks or more in a semester; OR
- (b) Fails to report and register by the last date of registration without a bonafide reason; OR
- (c) Violates the code of conduct, involves in ragging, etc. as confirmed by a Committee constituted for the purpose; OR
- (d) Does not earn the prescribed minimum number of credits within the maximum duration of the program; OR
- (e) Is on academic probation for two consecutive semesters.

## **14.2 Appeal against Termination**

A student, who is terminated from the B.Tech. Program can appeal to the Chairman, Senate, for reconsideration. While making such an appeal, the student is expected to give reasons for poor academic performance and/or why the termination should be reconsidered. The Senate shall take a final decision after considering all the available inputs. But, the Senate will not entertain any further appeal for review, unless substantial additional information is brought to its notice.

## **15. LEAVE RULES**

Application for leave of absence should be addressed to the Convener DUGC, and submitted with a medical certificate, if applicable. Usually, leave must not be availed of without prior approval of the DUGC.

### **15.1 Mid-Semester Recess and Vacation**

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

### **15.2 Short Leave**

A student may be granted leave of absence during the semester for a maximum of 10 days on medical grounds, and for 5 days for any other valid reason.

### **15.3 Semester Withdrawal**

It may be applicable in unforeseen circumstances or for medical reasons. Absence for a period of four or more weeks in any semester will result in automatic withdrawal from that semester. DUGC can approve and intimate Office of Academics regarding the leave of the student for records. In case, the leave extends beyond a semester, it can only be approved through the Academic Committee. Semester withdrawal on the medical ground will not be counted towards the maximum permissible duration of the programme for the student.

### **15.4 Academic Leave**

To help students broaden their horizons and gain course/work experience, she/he may be permitted to proceed to other academic institutes/ Industry/ R&D organization in India or abroad. Academic leave can be requested for any of the following reasons, such as

- (a) Fieldwork
- (b) Experimental work/training using specialized facility not available at IITJ
- (c) Entrepreneurship initiative
- (d) Engineering innovation
- (e) Exchange program – as part of an exchange program with an academic institution in India or abroad
- (f) Internship work

All such requests must be evaluated and approved by DUGC before the leave is granted.

A student may be allowed to spend a maximum duration of one summer term and two semesters on academic leave.

A student during academic leave can earn a maximum of 20 credits per semester as certified by the DUGC and approved by the Course Equivalence Committee.

## **16. BRANCH CHANGE**

- (a) An undergraduate student is eligible to apply for branch change at the end of the second semester only, provided the student satisfies the following criteria:

1. Secured a CGPA, at the end of the second semester, of:
    - i. Greater than or equal to 7.0 for SC/ST and PD applicants
    - ii. Greater than or equal to 8.0 for other applicants
  2. Completed all prescribed course credits for the first two semesters (including the non-graded courses).
  3. No backlog at the end of the second semester.
- (b) The student should have no disciplinary action against him/her.
- (c) Change of the branch will be permitted strictly in the order of merit as determined by CGPA at the end of the second semester. Each available seat may be occupied by students of any category. For students of SC/ST/PD category, concession in eligibility criteria is given as per rule (a).
- (d) In case more than one student applying for branch change have the same CGPA, the tie shall be resolved on the basis of JEE ranks of such applicants.
- (e) In making a change of branch, the strength of a branch should not fall below **85%** of the sanctioned strength and should not go above **115%** of the sanctioned strength.
- (f) The conditions mentioned in item (a) above will not be insisted upon for change to a branch in which a vacancy exists with reference to the sanctioned strengths, and the concerned student was eligible as per JEE Rank for admission to that branch at the time of entry to IIT Jodhpur.
- (g) Notwithstanding any of the conditions listed above, a student with CGPA of **9** or more at the end of the second semester will be allowed to move to a branch of his/her choice.

## 17. REQUIREMENTS FOR GRADUATION

A student is deemed to have completed the requirements for graduation if she/he has met the conditions laid down in Clauses 17.1 to 17.4.

### 17.1 Minimum Duration of Residence

Minimum Duration of Residence is given in the table below:

**Table 17.1** Minimum residential requirement

S.No.	Program	Minimum Duration of Residence (in semesters)
1.	B. Tech. (including minor/department/interdisciplinary area specialization)	6
2.	B. Tech. – M.Tech.	8

### 17.2 Academic

The student shall be declared to have fulfilled the academic requirements if she/he has earned the minimum credits as per Table 11.2 in Section 11.3 for all degrees.

### 17.3 Payment of Fees and Dues

The degree will be awarded after obtaining No Dues Clearance from all concerned sections as deemed necessary by Dean (Academics).

### 17.4 No case of Disciplinary Action

The student shall not be considered to have completed the Academic Requirements if there is any case of indiscipline pending against her/him.

## **17.5 Completion of engagement in NCC, NSS or NSO**

The student should have completed extra-curricular activity like performing arts, sports, National Cadet Corps, National Service Schemes, and National Sports Organisation for a period of at least two semesters during their B.Tech. Program.

## **17.6 Award of Degrees**

### **17.6.1 Provisional Certificate**

A student who completes all the graduation requirements specified in Clauses 17.1 to 17.4, can be provided a provisional certificate by the office of Dean (Academics) on the approval of Chairman, Senate. Certificate will have mention of major, minor, Department or Interdisciplinary Specialization wherever applicable.

### **17.6.2 Degree Certificate**

A student who completes all the graduation requirements specified in Clauses 17.1 to 17.4, 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. The certificate will have mention of major, minor, Department or Interdisciplinary Specialization wherever applicable.

## **18. AMENDMENTS**

Notwithstanding anything contained in this document, the Senate of IIT Jodhpur reserves the right to modify/amend without notice, the curricula, procedures, requirements, and rules pertaining to its B.Tech. Programs.

## **B. REGULATIONS FOR POSTGRADUATE PROGRAMMES**



## 19. POSTGRADUATE PROGRAMMES

The Indian Institute of Technology Jodhpur currently offers the following Postgraduate programmes.

1. Master of Science (M.Sc.)
2. Dual degree: M.Sc.-M.Tech.
3. Master of Technology (M.Tech.)
4. Dual degree: M.Tech.-PhD.
5. Doctor of Philosophy (Ph.D.)

## 20. POSTGRADUATE ADMISSIONS

The process of admission for all the programs offered by the Institute normally is underway during April-May for Semester 1 and during November-December for Semester 2. In addition, the department may process applications for admissions to PhD programs on a continuous basis and admit students as per the existing procedure.

### 20.1 Categories of Admission

A candidate can be admitted in any one of the following categories

- i. Full-time regular
- ii. Full-time sponsored
- iii. Part-time
- iv. External
- v. Executive

However, all categories are not applicable for all PG Programs. Further, programmes can be offered in a combination of these modes (like fully sponsored part-time program).

#### i) Full-time Regular

In campus student who can register for up to full credit permissible per semester. A student supported by a project of the institute will be considered a full-time regular student.

#### ii) Full-time Sponsored

In campus student who can register for up to full credit permissible per semester. The candidate is sponsored either by his/her employer or by self. A self-sponsored candidate must have two years of relevant industrial/R&D/academic experience.

#### iii) Part-time

A part-time student is a working professional who, while employed, attend regular classes as per the schedule of the Institute. The student must be employed in the neighbourhood of IIT Jodhpur. The student must produce a NOC from the employer for pursuing the programme at IIT Jodhpur. The student can register only for a limited number of credits as compared to a full-time regular student.

#### iv) External

A student working in an industry/R&D establishment/academic institution which is equipped with the necessary research and library facilities. The employer must relieve the student to stay in the campus to complete the minimum residency requirements.

#### v) Executive (only for M. Tech.)

A professional who can carry out/complete the programme requirement in

1. An accelerated fashion (minimum in 12 months), OR
2. Accumulates credits as per convenience and petitions a degree in a maximum of 6 years.

3. The part-time or full-time mode by attending courses offered in synchronized remote contact mode and limited direct interaction

## **20.2 Eligibility for Admission**

- (a) The eligibility conditions given below are the absolute minimum. Departments may prescribe any requirements over and above, subject to the approval of the Senate.
- (b) The number of admissions that can be made to any program shall be decided by the Senate from time to time.
- (c) Reservation of seats for various reserved categories shall be prescribed by the Board of Governors.

### **20.2.1 Admission to M. Sc. Program (Regular)**

The admission to the M.Sc. Programs offered by the Institute will be through any one of the following two avenues.

- (a) The applicants qualified through the Joint Admission Test for Master (JAM) organized by IITs.
- (b) The applicants having a bachelor's degree in any relevant discipline (3- or 4-year program) may be admitted based on written test and/or interview conducted by IIT Jodhpur.

The applicants under the category (b) must have a minimum of 60% marks for GEN/OBC (55% for SC/ST) category in aggregate or as specified by the university/institute or a minimum CGPA of 6.0 for GEN/OBC (5.5 for SC/ST) category on the scale of 10; with corresponding proportional requirements when the scales are other than on 10 (for example 4.8 for GEN/OBC category 4.4 for SC/ST) on a scale of 8) OR a first-class as specified by the university/institute.

### **20.2.2 Admission to M Sc – M Tech Dual Degree Program (Regular)**

The admission to the M. Sc.-M.Tech. Dual Degree Programs offered by the Institute will be through any one of the following two avenues.

- (a) The applicants qualified through the Joint Admission Test for Master (JAM) organized by IITs.
- (b) The applicants having a bachelor's degree in any relevant discipline (3- or 4-year program) may be admitted based on written test and/or interview conducted by IIT Jodhpur.

The applicants under the category (b) must have a minimum of 60% marks for GEN/OBC (55% for SC/ST) category in aggregate or as specified by the university/institute or a minimum CGPA of 6.0 for GEN/OBC (5.5 for SC/ST) category on the scale of 10; with corresponding proportional requirements when the scales are other than on 10 (for example 4.8 for GEN/OBC category 4.4 for SC/ST) on a scale of 8) OR a first-class as specified by the university/institute.

### **20.2.3 Admission to M Tech Program (Regular)**

- (a) The applicant must have bachelor's degree in engineering or science (4 year program) or a master's degree in science, MCA, Pharmacy, Medical Sciences, Agricultural Sciences and Veterinary Sciences or in a related field
- (b) A minimum of 60% marks for GEN/OBC (55% for SC/ST) category in aggregate or as specified by the university/institute or a minimum CGPA of 6.0 for GEN/OBC (5.5 for SC/ST) category on the scale of 10; with corresponding proportional requirements when the scales are other than on 10 (for example 4.8 for GEN/OBC category (4.4 for SC/ST) on a scale of 8) or a first-class as specified by the university/institute.
- (c) The applicant must either have a valid GATE score or exempted from GATE as per MHRD circular or have qualified an equivalent National Examination or have qualified in the written test and/or interview conducted by IIT Jodhpur.

#### **20.2.4 Admission to MTech Program (Executive/Part-time/ External/Sponsored)**

- (a) The applicant must have bachelor's degree in engineering or science (4-year program) or a master's degree in science, MCA, Pharmacy, Medical Science, Agricultural Science and Veterinary Science or in a related field.
- (b) A minimum of 60% marks for GEN/OBC (55% for SC/ST) category in aggregate or as specified by the university/institute or a minimum CGPA of 6.0 for GEN/OBC (5.5 for SC/ST) category on the scale of 10; with corresponding proportional requirements when the scales are other than on 10 (for example 4.8 for GEN/OBC category (4.4 for SC/ST) on a scale of 8) or a first-class as specified by the university/institute.
- (c) The applicant must have a minimum of **two** years of work experience (after qualifying degree) in industry/R&D laboratories/Academic Institutions at the time of registration to the program. However, the credit accumulation for the program may start immediately after the qualifying degree. Petitioning for the degree can happen only 1 year after registration.
- (d) The applicant must qualify the written test and/or interview conducted by IIT Jodhpur.

#### **20.2.5 Admission to M .Tech. – Ph.D. Dual Degree Program (Regular)**

- (a) The applicant must have bachelor's degree in engineering or science (4-year program) or a master's degree in science, MCA, Pharmacy, Medical Science, Agricultural Science and Veterinary Science or in a related field
- (b) A minimum of 60% marks for GEN/OBC (55% for SC/ST) category in aggregate or as specified by the university/institute or a minimum CGPA of 6.0 for GEN/OBC (5.5 for SC/ST) category on the scale of 10; with corresponding proportional requirements when the scales are other than on 10 (for example 4.8 for GEN/OBC category 4.4 for SC/ST) on a scale of 8) or a first-class as specified by the university/institute.
- (c) The applicant must either have a valid GATE score or exempted from GATE as per MHRD circular or have qualified an equivalent National Examination or have qualified in the written test and/or interview conducted by IIT Jodhpur.

#### **20.2.6 Admission to Ph.D. Program (Regular)**

- (a) Candidates admitted in this category shall not be a registered student in any other academic program in India or abroad, and shall not be a full-time or part-time employee of any organization in India or abroad.
- (b) The applicant must have a master's degree in engineering, pharmacy, agricultural science, science, humanities, social sciences, management with at least 60% marks or at least 6.0/10 CPI or CGPA for GEN/GEN-EWS/OBC (55% for SC/ST),  
OR
- (c) The applicant must have MBBS with MD/MS, BVSc with MVSc, BDS with MDS, BPTH with MPTh, BOTH with MOTTh or equivalent with at least 60% marks or at least 6.0/10 CPI or CGPA for GEN/GEN-EWS/OBC (55% for SC/ST) in bachelor's degree,  
OR
- (d) The applicant must have a bachelor's degree of minimum four-year duration in engineering or science or medicine or pharmacy or agricultural science or veterinary science or equivalent with at least 70% marks or at least 7.0/10 CPI or CGPA for GEN/OBC (65% for SC/ST).

#### **20.2.7 Admission under any special scheme like Quality Improvement Programme (QIP), Defence Personnel**

The procedures and criteria for admission of these candidates can be decided with the approval of Chairman, Senate.

### **20.2.8. Admission of Indian Nationals Residing Abroad (INRA) and Foreign Nationals**

INRA candidates must have been residing abroad continuously for at least one year at the time of applying for admission.

The applications of INRA and foreign nationals may be processed by the departments as and when they are received or according to any schedule convenient to the department. The applications should be scrutinized to make sure that, both in terms of qualifications and attainment they are comparable with the candidates admitted in the general category. Department will conduct VC based interview for ascertaining suitability of the candidate.

The applications of foreign nationals, who are sponsored by the Indian Council of Cultural Relations (ICCR) will be scrutinized by the department concerned to assess their suitability for admission to the programme. The department's recommendation will be sent to the Chairperson, Senate through the Chairperson, AC.

### **20.2.9 Admission to Ph.D (sponsored/external/part-time)**

- (a) Candidates admitted in this category shall not be a registered student in any other academic program in India or abroad.
- (b) The applicant must have a master's degree in engineering, pharmacy, agricultural science, science, humanities, social sciences, management with at least 60% marks or at least 6.0/10 CPI or CGPA for GEN/GEN-EWS/OBC (55% for SC/ST),  
OR
- (c) The applicant must have MBBS with MD/MS, BVSc with MVSc, BDS with MDS, BPTH with MPTh, BOTH with MOTh or equivalent with at least 60% marks or at least 6.0/10 CPI or CGPA for GEN/GEN-EWS/OBC (55% for SC/ST) in bachelor's degree,  
OR
- (d) The applicant must have a bachelor's degree of minimum four-year duration in engineering or science or medicine or pharmacy or agricultural science or veterinary science or equivalent with at least 70% marks or at least 7.0/10 CPI or CGPA for GEN/OBC (65% for SC/ST).
- (e) The applicant must have a minimum of **two** years of work experience (after qualifying degree) in industry/R&D laboratories/Academic Institutions at the time of registration to the program.
- (f) The applicant must qualify the written test and/or interview conducted by IIT Jodhpur.

### **20.3 Admission of Non-Degree Students**

A non-degree student is a student who is registered for a degree in a recognized institute or university in India or abroad, and who is officially sponsored by that institute or university to complete part of his/her academic requirements at IIT Jodhpur. For that purpose, the non-degree student may carry out research or take courses for credit or otherwise or may use other academic facilities.

Any candidate can be admitted as a casual student for specific courses provided the candidate satisfies the minimum eligibility criteria specified in Section 20.2. The application must be routed through the office of Dean R&D.

Students so admitted will be governed by all rules, regulations and discipline of the Institute.

### **20.4 Reservation Policy**

The reservation policy of Government of India will be followed.

## 21 PG REGISTRATION

### 21.1 Limits on Registration

Maximum and minimum number of credits a student can register in different programs:

- M.Sc.: An M.Sc. student can register for a maximum of 24 credits and a minimum of 10 credits in a semester.
- M.Tech.: An M.Tech. student can register for maximum and minimum credits as per Table 21.1.

**Table 21.1** Maximum and Minimum Credits an M.Tech. student can register for during the Regular semester/Summer Term

	<b>M.Tech. student registered under different categories</b>	<b>Maximum Credits</b>	<b>Minimum Credits</b>
Regular Semester	Executive (Accelerated)	24	10
	Executive (Normal)	17	10
	Executive (Slow-Paced)	12	3
	Executive (Part Time)	12	3
	Full-time (Regular/Sponsored)	17	10
	External	20	10
	Part-time	12	3
Summer Term	Executive (Accelerated)	16	0
	Executive (Normal)	9	0
	Executive (Slow-Paced)	6	0
	Full-time (Regular)	9	5
	Full-time (Sponsored)	9	0
	External	9	0
	Part-time	6	0

- M.Tech.-Ph.D. dual degree/Direct Ph.D. (Joining after B.Tech.) - The maximum and minimum credits that an M.Tech.-Ph.D. dual degree student can register are equivalent to that of an M.Tech. (Regular/External/Part-time) student.
- Ph.D.: A Ph.D. student can register for maximum and minimum credits as per Table 21.2.

**Table 21.2** Maximum and Minimum Credits a Ph.D. student (Regular) can register for during the Regular semester

<b>Ph.D. student registered under different categories</b>	<b>Maximum Credits</b>	<b>Minimum Credits</b>
Full-time Regular	12	6
External	12	6
Part-Time	12	3

#### 21.1.1 Registration Kept Alive (RKA)

A student admitted to an M.Tech program who has at least completed minimum credit requirement of the first semester, can keep his studentship alive while he is pursuing any professional activity, by opting for RKA in subsequent semesters. The candidate must indicate his intent of RKA before the last date of late registration through DRC to Dean(academic). The candidate has to pay appropriate registration fees for RKA status. A student can maintain RKA status for a maximum of 6 semesters.

## **21.2 Change of Registration from M.Tech. Programme to M.Tech.-Ph.D. dual degree Programme**

A regular student registered for the M.Tech. programme having CGPA 8 or more at the end of the second semester may be allowed to switch to M.Tech.-Ph.D. dual degree program till the end of the third semester. As a special case, a student can switch to a dual degree in the fourth semester with the approval of DRC, provided his/her CGPA is 8 or more, who will then be required to complete his/her candidacy requirements by the end of the fifth semester.

All conditions of M.Tech.-Ph.D. dual degree program will be applicable to all such students. All such changes of registration shall be reported to the Senate.

## **21.3 Change of Registration from Part-Time M.Tech. to Part-Time Ph.D. Program**

A part-time M.Tech. student having CGPA 8 or more after completion of at least 24 credits may be allowed to change his/her registration to the Ph.D. program. The credits earned will be counted towards his/her Ph.D. course work requirements.

## **21.4 Change of Registration from Full-Time to Part-Time/External Ph.D. Programme**

A student admitted to a full-time Ph.D. programme may be permitted to change to a part-time Ph.D. programme. A student requesting such a conversion must:

- i) have successfully completed his/her candidacy requirement;
- ii) get the request endorsed by the supervisor(s) and the DRC;
- iii) produce a "No Objection" Certificate from his/her employer for carrying out the research work.

## **21.5 Maximum Duration of a Program**

- **M.Sc.** - 8 registered semester
- **M.Tech. (Regular and Part-time/External/Executive)** - 12 registered semesters which may include maximum 6 semesters of Registration kept Alive (RKA) after completion of the first semester. Tuition fee post RKA will be same as that of sponsored candidates.
- **Ph.D. and M.Tech.-Ph.D. dual degree (Regular and Part-time/External)** - 14 registered semesters which may include maximum 6 semesters of Registration kept Alive (RKA) after completion of the two semesters. Tuition fee post RKA will be same as that of sponsored candidates.
- Students may request for RKA to Dean (Academics) through DRC.

## **21.5 Course Registration**

Students will be eligible to register for courses as per the criterion specified in Section 21.1 and Table 4.4.

**The DRC/ IRC must oversee that the student has not registered for a similar course during her/his Masters or Bachelors program.**

## 22 ACADEMIC REQUIREMENTS

### 22.1 Academic Load & Calculation of Credits for a Course for PG Programmes

The total credits for a course are calculated by taking into account the number of lectures, tutorial, and practical hours (L-T-P) assigned as given in Table 22.1 and 22.2 for M.Sc. and M.Tech. Ph.D. programmes respectively. Each credit is associated with the number of contact hours and the expected number of self-learning hours (on an average) to be spent by the student for each contact hour to meet academic demand of the course.

**Table 22.1** LTP-structure and credit assignment for M.Sc.

Type	L-T-P	Distribution of contact and beyond contact Hours <sup>#</sup>			Total Credits (TC=TH/3)
		Contact Hours (CH)	Beyond Contact Hours (BCH)	Total Hours (TH)	
1 hour of Lecture	1-0-0	1	2	3	1
1 hour of Tutorial	0-1-0	1	2	3	1
1 hour of Lab	0-0-1	1	0.5	1.5	0.5
1 hour of Project#	0-0-1	1	2	3	1

#Contact hour for project refers to the involvement of students in the laboratory, discussion, etc.

**Table 22.2** LTP-structure and credit assignment for M.Tech./Ph.D.

Type	L-T-P	Distribution of contact and beyond contact Hours <sup>#</sup>			Total Credits (TC=TH/4)
		Contact Hours (CH)	Beyond Contact Hours (BCH)	Total Hours (TH)	
1 hour of Lecture	1-0-0	1	3	4	1
1 hour of Tutorial	0-1-0	1	3	4	1
1 hour of Lab	0-0-1	1	1	2	0.5
1 hour of Project#	0-0-1	1	3	4	1
1 hour of Thesis (Ph.D.)	0-0-1	1	3	4	1

#Contact hour for project refers to the involvement of students in the laboratory, discussion, etc.

### 22.2 Course categories for Masters' programmes

- 1) Compulsory Course (MC)
- 2) Programme Elective (ME)
- 3) Open Elective (MO)
- 4) Project works (MP)
- 5) Non-graded (NG)

### 22.3 Academic Credit Requirements for M.Sc. Students

Course categories and academic requirements for M.Sc. students are given below in Table 22.3.

**Table 22.3** Programs/ Credits to be earned for MSc students

Programs	Minimum Credits to be earned				
	MC	ME	MO	MP	Total
M.Sc. (Chemistry)	38	18	06	15	77
M.Sc. (Mathematics)	38	18	06	15	77
M.Sc. (Physics)	38	18	06	15	77

## 22.4 Academic Credit Requirements for M.Tech. Students/ Executive M.Tech.

Course categories and academic requirements for M.Tech. students are given below in Table 22.4.

**Table 22.4** Minimum Credits to be earned For MTech students

Programs	Minimum Credits to be earned					
	MC	ME	MO	MP	NG	Total
M.Tech (Sensors and Internet of Things)	19	17	06	16	4	62
M.Tech (Cyber Physical System)	18	18	06	16	4	62
M.Tech (Thermofluids Engineering)	17	17	06	16	4	60
M.Tech (Advanced Manufacturing Engineering and Design)	19	15	06	16	4	60
M.Tech (Metallurgical and Materials Engineering)	16	18	06	16	4	60
M.Tech (Artificial Intelligence)	18	18	06	16	4	62
M.Tech (Computer Science and Engineering)	18	18	06	16	4	62
M.Tech (Bioscience and Bioengineering)	18	17	06	16	4	61
M.Tech (Data and Computational Sciences)	20	15	06	16	4	61

## 22.5 Academic Credit Requirements for M.Sc. - M.Tech. Dual Degree

Minimum credit requirements for M.Sc. - M.Tech. Dual Degree is the cumulative sum of credit requirements for respective M.Sc. program and M.Tech. program as mentioned in Sections 22.3 and 22.4.

## 22.6 Academic Credit Requirements for M.Tech. - Ph.D. Dual Degree

Course categories and academic requirements for MTech - PhD dual degree students are given below in Table 22.5.

**Table 22.5** Minimum Credits to be earned for dual degree MTech and PhD students

Programs	Minimum Credits to be earned					
	MC	ME	MO	MP	NG	Total
M.Tech-Ph.D Dual Degree (Sensors and Internet of Things)	19	17	06	16	4	62
M.Tech-Ph.D Dual Degree (Cyber Physical System)	18	18	06	16	4	62



M.Tech-Ph.D Dual Degree (Communication and Signal Processing)	17	17	06	16	4	60
M.Tech-Ph.D Dual Degree (Thermofluids Engineering)	17	17	06	16	4	60
M.Tech-Ph.D Dual Degree (Manufacturing Engineering)	17	17	06	16	4	60
M.Tech-Ph.D Dual Degree (Design Engineering)	17	17	06	16	4	60
M.Tech-Ph.D Dual Degree (Metallurgical and Materials Engineering)	16	18	06	16	4	60
M.Tech-Ph.D Dual Degree (Computer Science and Engineering)	18	18	06	16	4	62
M.Tech-Ph.D Dual Degree (Artificial Intelligence)	18	18	06	16	4	62
M.Tech-Ph.D Dual Degree (Bioscience and Bioengineering)	18	17	06	16	4	61

The DRC/ IRC must oversee that the student has not registered for a similar course during Bachelors program and take necessary corrective action by suggesting alternative courses

## 22.7 Academic Credit Requirements for Ph.D. Students

The minimum credits to be earned through courses is listed in Table 22.6.

**Table 22.6** Credit Requirements for PhD students

S.No.	Ph.D. in	With	Minimum Credits through Course Work	Minimum Credits through Thesis Work
1.	Engineering discipline/ IDRPs	M.Tech., M.E. or M.Sc. (Engineering) in an Engineering discipline	12	48
		M.Sc. degree in a Science discipline	30	48
		B.Tech., B.E. or B.Sc. (Engineering) in an Engineering discipline	30	48
2.	Science, Humanities or Social Science discipline	M.Sc., M.A. and M.Phil. degree in a Science, Humanities or Social Science discipline	12	48

## 22.8 Academic Performance Requirements

### 22.8.1 Minimum performance for continuation and Graduation in a program

The minimum CGPA requirement for continuation and graduation in a program is given in below Table 22.7.

**Table 22.7** Minimum CGPA requirements

Sr. No.	Program	Continuation in Programme	For graduation
1	M.Sc. (only graduation requirement)	Refer 22.8.2	5.0
2	M.Tech.	5.0	5.0
3	Dual Degree (M.Sc. and M.Tech.)	5.0	5.0
4	Dual Degree (M.Tech. and Ph.D.)	7.0	7.0
5	Ph.D.	7.0	7.5 at the completion of course work

**22.8.2 Continuing criteria for M.Sc.**

**M.Sc.-** The student must earn at least 20 credits at the end of the second semester for continuation in the program.

**22.8.3 Minimum performance for continuation Assistantship/Fellowship**

The minimum CGPA requirement for continuation Assistantship/Fellowship is given in below Table 22.8

**Table 22.8** Minimum CGPA requirements for Continuation of Assistantship/Fellowship

Sr. No.	Program	Continuation of Assistantship/Fellowship
1	M.Tech.	6.5
2	Dual Degree (M.Tech. and Ph.D.)	7.0
3	Ph.D.	7.0

**23. LEAVE RULES**

Application for leave of absence should be addressed to the Convener DRC, and submitted with a medical certificate, if applicable. Usually, leave must not be availed of without prior approval of the DRC.

**23.1 Leave**

A maximum of 30 days in an academic year (including leave on medical grounds + mid semester break). The student must apply for leave in advance even during the summer/winter term or mid-semester break.

A PhD student cannot avail leave for more than 15 days at a stretch

An M.Tech./M.Sc. student cannot avail leave for more than 10 days at a stretch

The leave beyond 30 days in an Academic Year may be granted in exceptional cases by DRC without assistantship during that period.

**23.2 Other Leaves**

Maternity leave for Ph.D. students is sanctioned as per the directives of MHRD. It will not be counted towards the maximum permissible duration of the programme.

Any other leave may also be permissible as per the guidelines of MHRD.

### **23.3 Semester Withdrawal**

May be applicable in unforeseen circumstances or for medical reasons. Absence for a period of four or more weeks in any semester will result in automatic withdrawal from that semester. In all such cases, the fellowship will be stopped with immediate effect and it will be continued for only after the student rejoins the institute. DRC can approve and intimate Office of Academics regarding the leave of the student for records. In case, the leave extends beyond a semester, it can only be approved through the Academic Committee. Semester withdrawal on the medical ground will not be counted towards the maximum permissible duration of the programme for the student.

### **23.4 Academic Leave**

Academic leave can be requested for any of the following reasons, such as

1. Fieldwork
2. Library work- because of a specialized collection at a particular library
3. Experimental work/training using specialized facility not available at IITJ
4. Attending conferences/workshops/summer/winter schools/symposium
5. Collaborative work as part of joint M.Tech./Ph.D. supervision
6. Collaborative work for a specific problem related to his ongoing Ph.D programme as indicated in his research proposal
7. Exchange program – as part of an exchange program with a sister institution in India or abroad

All such requests must be evaluated and approved by SRC/DRC/IRC before the leave is granted. SRC/DRC/IRC must also make recommendations regarding continuation of fellowship during academic leave.

- A student may be allowed to spend a maximum duration of one year on academic leave.
- A student during academic leave can earn a maximum of 12 credits per semester as certified by SRC and approved by DRC.

## **24. FINANCIAL ASSISTANCE**

Financial assistantship/scholarship will be provided to the eligible students admitted under regular full-time program. The eligibility criteria are as per the following:

### **24.1 M.Sc. Program**

Merit-cum-Means fellowship as per Institute norms.

### **24.2 M.Sc.-M.Tech. Dual-Degree Program**

A student having completed minimum credit requirements of an M.Sc. program at the end of the second year with

(a) CGPA  $\geq 8$

OR

(b) have qualified GATE can have financial support from MHRD or project fund.

### **24.3 M.Tech. Program**

A regular M.Tech. student with GATE can have financial support from MHRD or project fund. A student may be exempted from GATE as per MHRD guidelines.

## **24.4 Executive M Tech Program**

Students admitted in this category will not be provided any financial assistance from the Institute.

## **24.5 M.Tech. – Ph.D. Dual Degree Program**

Rules and regulations governing financial assistance for dual degree students will be at par with regular Ph.D. students.

## **24.6 Ph.D. Program**

A regular Ph.D. student admitted to the Institute will be eligible for financial assistance as per the norms of IIT Jodhpur.

- (a) A candidate having B.Tech./B.S. (four-year program)/Master's degree with GATE/NET(JRF)/NBHM (or equivalent) can have financial assistance as per MHRD norms/or equivalent applicable for non-science departments.
- (b) The requirement of GATE is exempted for an applicant with M.Tech or equivalent post-bachelor's degree
- (c) A student may be exempted from GATE as per MHRD guidelines.

A Ph.D. student would be eligible for enhancement in the scholarship after two years provided the student has met qualifier requirement. The enhanced fellowship will commence from the date of completion of both the conditions. No arrears will be provided due to delay in completing the qualifier requirement.

The Teaching/Research Assistantship of a Ph.D. student shall stop from the day of submission of the Thesis.

## **25. RULES AND REGULATION FOR CONDUCT AND EVALUATION OF M. TECH./M.SC. PROJECT**

- Allotment of students to supervisors will be made based on the preferences of the students and supervisor(s).
- The supervisor and area identification must be completed by the end of the first semester.
- Coordinator, M. Tech. Program would advise until the student is assigned to a regular supervisor(s).
- Each semester a letter grade will be awarded after examination by a committee consisting of DRC, supervisor(s) and two members conversant with the field of research with at least one member external to the department (maybe outside the Institute also). DRC will appoint examiners in consultation with the supervisor. The same committee may examine more than one thesis. External member can be on VC. DRC will ensure that Award of letter grade would be as per relative grading policy.
- A regular full-time student must register for M.Tech Project Part-1 in the summer semester following 2<sup>nd</sup> semester. He must obtain a satisfactory grade to continue M.Tech project part-1 in the next semester. His performance in the summer semester will be evaluated by his supervisor.

## **26 RULES AND REGULATIONS FOR PH. D. /M. TECH.-PH. D. DUAL DEGREE PROGRAM**

### **26.1 Thesis Supervisor(s)**

#### **26.1.1 Selection of Ph.D. Candidates**

The selection should be based on merit and capability of the candidate to conduct research. There should at least be a faculty member available or likely to join in the areas of interest of the candidate at the time of selection.

#### **26.1.2 Appointment of Thesis Supervisor(s)**

- Ph. D. students shall be admitted in the department and no supervisor shall be assigned at the time of selection.
- Allotment of students to supervisor(s) will be made based on the preferences of the students and supervisor(s).
- For both Ph. D. and M. Tech. - Ph. D. Dual degree supervisor(s) and area identification must be completed by the end of the first semester
- The Convener, DRC (Department Research Committee)/Coordinator (Interdisciplinary Research Program) would advise until the student is assigned to a regular supervisor(s).
- There shall not be more than two supervisors, in general, for a student. Additional supervisor can be allowed with the approval of Chairman, Senate.
- A supervisor from outside the institute, **before the qualifier**, may be appointed on the request of student/supervisor(s) with the recommendation of the DRC/IRC and the Dean (Academics) and approval of the Chairman, Senate.
- The external supervisor will be requested to sign Intellectual Property Right (IPR) and Non-Disclosure Agreement (NDA) documents as a part of acceptance. From the financial point of view the Institute will have no obligation to the external supervisor.

#### **26.1.3 Caretaker Supervisor/Additional supervisor**

- Whenever the supervisor proceeds on short leave for a period up to one year, the DRC/IRC (Interdisciplinary Research Committee) shall appoint a caretaker supervisor in consultation with the supervisor and the student to take care of the administrative requirements.
- Whenever the supervisor proceeds on long leave for a period more than a year, then an additional supervisor needs to be appointed on the suggestion of the supervisor.
- The supervisor going on lien or sabbatical may continue supervising students and the supervisor can opt for either an additional supervisor or a caretaker supervisor.
- The supervisor on his/her retirement or on resignation may continue as a supervisor and will have to opt for an additional supervisor provided the student has cleared qualifier before the supervisor's retirement/resignation.

#### **26.1.4 Composition of Departmental Research Committee (DRC)**

The DRC will consist of coordinators of M.Tech, M.Tech.-Ph.D. dual degree and Ph.D. programs of the department, head of the Department and Senior Professor/Associate Professor proposed by the Head. The DRC will be Chaired by Professor/Associate Professor nominated by Head of the Department. The Chairman of the DRC will be a member of the Academic Committee. The DRC has to be approved by Dean (Academics). Ph.D. program coordinator will be the convener of DRC and will be proposed by the head. The tenure for the DRC will be 2 years.

### **26.1.5 Composition of Interdisciplinary Research Committee (IRC)**

The IRC will consist of all coordinators of IDRPCs and Senior Professor/Associate Professor as the chairman of the IRC will be nominated by Dean (Academics). The chairman of IRC will be a member of AC. One of the IDRPC co-ordinators would be convener of the committee. The tenure for the IRC will be 2 years. The IRC will be approved by the Dean (Academics).

### **26.2 Change of Research Supervisor**

Change of supervisor (s), under exceptional circumstances, shall be permitted by Dean (Academics) on the recommendation of the DRC/IRC after obtaining the consent of (i) the student (ii) the present supervisor (s) and (iii) the proposed supervisor(s). If required, realignment of student's research program will happen under the supervision of the DRC/IRC.

### **26.3 Student Research Committee (SRC)**

#### **26.3.1 Composition of SRC**

- The SRC will normally consist of supervisor(s) and three other faculty members conversant with the field of research with at least one member external to the department (maybe outside the Institute also).
- A Student Research Committee (SRC) for the candidate shall be proposed by the supervisor(s), recommended by the DRC/IRC and approved by Dean (Academics).
- The SRC shall have one member identified as Chairman for administrative functions and the supervisor(s) will act as convener. Chairman, SRC is to be appointed by Dean (Academics).
- The appointment of SRC should be completed by the end of the first semester.
- Any subsequent changes in the composition of SRC shall be communicated through the DRC/IRC to Dean (Academics) for record.
- Chairman and supervisor(s) shall be the internal examiners for the evaluation of the thesis.
- The SRC is expected to monitor the progress of the candidate until the completion of the program.

### **26.4 Annual Progress Monitoring Meeting (APM)**

The academic progress of all registered Ph.D. students will be reviewed once in a year by the SRC and peers in the institute. The review will be based upon (i) Annual Progress Report and (ii) A Poster Presentation open to all. SRC will award a Satisfactory/Non-Satisfactory grade based upon (i) and (ii). Two consecutive Non-satisfactory grades will lead to termination of registration.

For implementational convenience, academic calendar must indicate two days in a year for conducting annual progress evaluation of research scholars. Following the groupings of students and scheduling guidelines are suggested

1. For students joining in 1st semester of AY: During 1st July to 30th September of the year.
2. For students joining in 2nd semester of AY: During 1st December to 28th February of the year.

The first APM will be conducted after the successful completion of qualifier requirements.

Each semester "Satisfactory" progress or "Unsatisfactory" progress will be reported by the supervisor(s) through the SRC for record.

Any situation in exception to the above will be processed by the academic committee and approved by Dean (academics)

## 26.5 Qualifier requirements of Ph.D. Student

The following four components together will constitute qualifier (candidacy) requirements for a Ph. D. student and for a Ph. D. candidate to be eligible for the enhanced SRF fellowship.

1. Completed course requirements with the minimum CGPA specified in Section 22.8.1
2. Cleared comprehensive examination
3. Successful presentation on state of the art of the chosen field of research
4. Successful presentation and defense of Research proposal

The Ph. D. students are normally expected to complete successfully the Qualifier requirements **before the beginning of the fifth semester** of his/her registration in the Ph. D. program and in any case **not later than the beginning of the sixth semester** after their registration in the Ph. D. program. Part-time candidates will need to complete the qualifier requirement before the beginning of the seventh semester.

### 26.5.1 Comprehensive Examination of Ph. D. /M.Tech-Ph.D Student

- The comprehensive examination must be designed to test the general capability of the student and the breadth of his/her knowledge in the discipline and areas related to the field of research.
- The Comprehensive Examination shall be conducted by a Comprehensive Examination Committee of the Department/IDRP.
- The Comprehensive Examination will consist of a written test with three papers.
- Departments will offer at least 5 Papers for conducting a comprehensive examination. Each paper will have broad coverage of one essential sub-area of the department. The course content of these papers will be approved by the academic committee and the Senate. The syllabus of papers for the comprehensive examination will not be the same as courses offered by the department; it must be designed to test the breadth of the knowledge in that area.
- The SRC will specify a set three papers as a comprehensive requirement for a particular student. These three papers may be selected from across the departments.
- The comprehensive examination requirements shall be intimated to the Ph.D. student within **two weeks** of SRC formation.
- All comprehensive examinations will be scheduled on two fixed days in a year. It can coincide with the annual progress evaluation day of doctoral candidates. Students may decide to appear for three papers on the same day or on different days.
- A student can appear in the comprehensive examination before he/she has completed the course requirements and satisfied the minimum specified CGPA requirement.
- If the performance of the Ph.D. student in a comprehensive examination paper in the first attempt is not satisfactory, he/she will be given one more opportunity to appear within six months of the first attempt.
- For clearing of the comprehensive examination, a student must perform satisfactorily in all papers.

#### Comprehensive Examination to be completed by the students:

- Ph.D. : within 3 semesters
- Direct Ph.D. and MTech - PhD Dual Degree: within 5 semesters

### 26.5.2 State of Art Seminar (SOTA)

Every Ph.D. student is required to give a general seminar in the Department covering the State of Art of the area of research. The presentation must also include patent landscaping of the

area. The presentation will be evaluated by the SRC. A candidate must have a satisfactory grade in SOTA awarded by SRC for becoming eligible to present his research proposal.

### **26.5.3 Research Proposal**

Research proposal (report + presentation) will be evaluated by SRC after successful completion of SOTA. The research proposal must include representative research work equivalent to research work worth 16 credits. SRC will allocate a letter grade based on the performance of the candidate.

### **26.6. Candidacy for the Ph.D. Degree**

A student enrolled in the Ph.D. program is formally admitted to the candidacy for the Ph.D. degree after he/she has completed the qualifier requirements for the degree. Only such students who are admitted to the candidacy will be allowed to submit Ph.D. thesis.

### **26.7 Relaxation in M.Tech. -Ph.D. dual degree program**

- M.Tech.-Ph.D. dual degree students who have successfully completed all qualifier requirements, under exceptional conditions, as approved by SRC after 3 years can also convert into part-time/external Ph.D. student and exit with M.Tech degree if all conditions for part-time/external conversion are satisfied.
- The renewal of their registration for every semester however, will be considered only if SRC finds their progress to be satisfactory and recommends the continuance of registration.

### **26.8 Cancellation of Registration**

- The registration of a student whose progress is not found to be satisfactory by the SRC or who has not enrolled will be liable for cancellation.
- The registration of a student who has not submitted his/her thesis before the end of the maximum permissible period specified in Section 21.5 will be liable for cancellation.

### **26.9 Synopsis**

- Synopsis will consist of an open seminar and a comprehensive internal closed-door assessment of the research work, through a pre-synopsis report, by SRC.
- The student can submit the synopsis only if the SRC is satisfied with the quality and quantity of the work for submission as a Ph.D. thesis.
- Publications arising out of the thesis are to be submitted along with the pre-synopsis report.
- Students should submit the synopsis and thesis within **six** months of the open seminar date. If required, an extension of **three** months may be permitted by Dean (Academics) on the recommendation of SRC.
- If the synopsis and thesis are not submitted in the specified period, the student will be asked to present the synopsis again.
- On satisfactory completion of the prescribed courses with minimum CGPA specified in 4.6.1, the comprehensive examination, the SOTA, the research work and the synopsis, the student shall submit the requisite copies of the synopsis of his/her research work in the required format through the supervisor(s) and HoD to the Academic Section for consideration of the SRC.



- The student should have at least one paper either published or accepted for publication in a refereed journal/refereed conference (SRC members are required to certify the quality of journals/conference).

## 26.10 Thesis submission and Evaluation

The supervisor(s) shall propose a list of 10 examiners consisting of at least four Faculty Members from abroad and 4 Faculty Members from India, who have the expertise in the area in which the student undertook research. For selecting an examiner, the following guidelines should be followed

- The examiners shall have at least 6 years of Post-Ph.D. experience;
- No two proposed examiners shall be from the same organization; and
- The examiners can be Faculty Members or Scientists, of standing and repute.
- **Chairman, Senate may ask for additional names for examiners.**
- The Chairman, Senate, shall select **minimum** two examiners from the proposed list, of which at least one should be an examiner from outside India. The consent of these examiners shall be taken before sending the Thesis to them. **In addition, SRC and Supervisor(s) shall be the examiners of the Thesis.**
- **The Viva Voce will be conducted in the presence of SRC, supervisor(s) and the external examiner.**
- One of the external examiners shall attend the Thesis Defense.
- The examiners shall submit a written report on the thesis within a period of two months from the date of receipt of the Thesis.
- If both examiners declare the Thesis as acceptable for award of Ph.D. degree, the Dean (Academics) shall request the Supervisor(s) to hold the Thesis Defense by the student.
- If any of the examiners reject the Thesis for the award of the Ph.D. degree, the Dean (Academics) shall report the matter to the Chairman, Senate, for further consideration. The Chairman, Senate, will refer the Thesis to a third examiner under special circumstances; else the registration of the student shall stand cancelled in the Ph.D. program.
- If both examiners reject the Thesis for the award of the Ph.D. degree, no degree shall be awarded by the Institute, and the registration of the student shall stand cancelled in the Ph.D. program.
- If an examiner suggests a revision of the Thesis, the student shall resubmit the Thesis after the revision within a prescribed time period of **6 months in consultation** with the Supervisor(s).
- When both examiners recommend the Thesis as accepted for the student to defend the Thesis, or after the resubmission of the Thesis after incorporating the suggestions/corrections given by the examiners, the student shall publicly present the Thesis and defend the contention of the Thesis.
- The committee consisting of Chairman SRC, Supervisor(s), the Examiner from within India and other Faculty Members (quorum would be Chairman, SRC, Supervisor(s) and an external examiner), who participated in the Comprehensive Examination of the student, shall evaluate the Thesis Defense of the Ph.D. student also. On their recommendation, Dean (Academics) shall recommend to Senate, to consider the award of Ph.D. degree to the student.

## 27. GRADUATION REQUIREMENTS

A student is deemed to have completed the requirements for graduation if she/he has met the requirements laid down in Clauses 27.1 to 27.4 below.

## 27.1 Minimum Residential Requirement

**Table 27.1** Minimum residential requirement

S.No.	Program	Qualifications at the time of joining the Program	Minimum Duration (in semesters) of Residence
1.	M.Sc.	All qualifying degrees	4
2.	M.Sc.-M.Tech. Dual Degree	All qualifying degrees	7
3.	M.Tech. Programs		
	Full-time Regular /Sponsored	All qualifying degrees	3
	Part-time	All qualifying degrees	0
	Executive	All qualifying degrees	1
4.	Ph. D. Programs		
	Full-time Regular		
	Engineering discipline	M.Tech., M.E. or M.Sc. (Engineering) in an Engineering discipline	2
		M.Sc. degree in a Science discipline	5
		B.Tech., B.E. or B.Sc. (Engineering) in an Engineering discipline	5
	Science, Humanities or Social Science discipline	M.Sc., M.A. and M.Phil. degree in a Science, Humanities or Social Science discipline	2
	Part-time	All qualifying degrees	0
	External	All qualifying degrees	1

## 27.2 Academic

The student shall be declared to have fulfilled the academic requirements if she/he has earned the minimum credits as per Section 22.3 for M. Sc., Section 22.4 for M. Tech., Section 22.5 for M. Sc.-M.Tech. Dual Degree, Section 22.6 for M.Tech-Ph.D. Dual Degree and Section 22.7 for Ph.D., while meeting the minimum CGPA requirements as mentioned in Section 22.09.

## 27.3 No Dues Clearance

Degree will be awarded after obtaining No Dues Clearance from all concerned sections as deemed necessary by Dean (Academics)

## 27.4 No case of Disciplinary Action

The student shall not be considered to have completed the Academic Requirements if there is any case of indiscipline pending against her/him.

## **27.5 Award of Degrees**

### **27.5.1 Provisional Certificate**

A student, who completes all the graduation requirements specified in Clauses 27.1 to 27.4, can be provided with a provisional certificate by the office of Dean (Academics) on the approval of Chairman, Senate.

### **27.5.2 Degree Certificate**

A student, who completes all the graduation requirements specified in Clauses 27.1 to 27.4, 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.

## **28. AMENDMENTS**

Notwithstanding anything contained in this document, the Senate of IIT Jodhpur reserves the right to modify/amend, without notice, Rules and Regulations of the Postgraduate programmes at IIT-Jodhpur.