# **ORDINANCES AND REGULATIONS**

# **B.Tech / B.Tech (Honours)**

(Applicable from 2015batch onwards)



# INDIAN INSTITUTE OF TECHNOLOGY MADRAS CHENNAI – 600 036

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Revised up to 269<sup>th</sup> Senate held on 2-09-2015

#### **ORDINANCES AND REGULATIONS**

#### **B.** Tech / B.Tech (Honours)

# ORDINANCES

- O.1 Candidates should have passed
  - Final examination of the 10+2 system, conducted by any recognized Central/ State Board, such as Central Board of Secondary Education, New Delhi; Council for Indian School Certificate Examination, New Delhi, etc. OR
  - Intermediate or two-year Pre-University Examination conducted by a recognized Board/University OR
  - Final Examination of the two-year course of the Joint Services Wing of the National Defence Academy OR
  - General Certificate Education (GCE) Examination (London/Cambridge/Sri Lanka) at the Advanced (A) Level OR
  - High School Certificate Examination of the Cambridge University or International Baccalaureate Diploma of the International Baccalaureate office, Geneva or
  - Any Public School/Board/University examination in India or in any foreign country recognized as equivalent to 10+2 system by the Association of Indian Universities (AIU) OR
  - ✤ H.S.C. Vocational Examination OR
  - Senior Secondary School Examination conducted by the National Open schooling with a minimum of five subjects OR
  - ♦ 3 or 4 year Diploma recognized by AICTE or a State Board of Technical Education and
  - In case the relevant qualifying examination is not a public examination, the candidate must have passed at least one public (Board or Pre-University) examination at an earlier level.

#### AND

The candidate should be among the top 1,50,000 (all categories included) in JEE (Main) of the respective years and should satisfy <u>at least one of these two criteria</u>:

- I. He/she is within the category-wise top 20 percentile of successful candidates in his/her respective Class XII (or equivalent) board examination.
- II. He/she has secured 75% (for GEN or OBC-NCL) or 70% (SC, ST or PwD) of aggregate marks in the Class XII (or equivalent) board examination
- The marks scored in the following five subjects will be considered for calculating the aggregate marks and the cut-off marks for fulfilling the top 20 percentile criterion: (1) Physics, (2) Chemistry, (3) Mathematics, (4) a language (if the candidate has taken more than one language, then the language with the higher marks will be considered), and (5) any subject other than the above four (the subject with the higher marks will be considered).

- In case any of the subjects Physics, Chemistry, Mathematics and Language are not evaluated in the final year (e.g., in a 3-year diploma course), then the marks for the same subject from the previous year will be used for calculating the top 20 percentile cut-off and percentage of aggregate marks.
- Candidates who have failed in one or more subjects in the Class XII (or equivalent) examination will have to reappear for all the subjects in subsequent year.
- For candidates who appeared for the Class XII (or equivalent) Board Examination, but reappeared in all subjects in subsequent year, the best of two performances will be considered.
- If a Board awards only letter grades without providing an equivalent percentage of marks on the grade sheet, the candidate should obtain a certificate from the Board specifying the equivalent marks and submit it at the time of online acceptance of the allocated seat. In case such a certificate is not provided, the decision taken by the Joint Implementation. Committee of JEE (Advanced) will be final.
- If a Board gives aggregate marks considering both Class XI and Class XII examinations (in the 10+2 system), then only the Class XII marks will be considered. If a Board gives aggregate marks considering the results of all three years of a 3-year diploma or courses of equivalent duration, then only the marks scored in the final year will be considered. Similarly, for Boards which follow a semester system, the marks scored in the final two semesters will be considered.
- If a Board does not give marks scored in individual subjects but gives only the aggregate marks, then the aggregate marks given by the Board will be considered as such.
- The criteria, as specified above, is applicable "in toto" to all the candidates including foreign nationals.

#### Regarding the cut-off marks for the top 20 percentile

- The category-wise cut-off marks for the top 20 percentile are calculated based on the marks scored by all the "successful" candidates in their respective boards.
- The cut-off marks for PwD candidates will be the same as the lowest of the cut-off marks for GEN, OBC-NCL, SC and ST categories.
- The top 20 percentile cut-off marks of an year of the respective Boards only will be considered for candidates who pass the Class XII (or equivalent) examination in that year and not cut-off marks of subsequent year.
- In case a Board does not provide information about the cut-off for the top 20 percentile, the candidate will have to produce a certificate from the respective Board stating that he/she falls within the top 20 percentile of successful candidates. If the candidate fails to do so, then the cut-off marks for the CBSE will be used.

#### AND

Candidates who have been placed in the final merit list in the JEE (Advanced) administered jointly IITs are eligible to be considered for admission to the B.Tech/Dual Degree programme in the year in which the JEE (Advanced) is held.

In addition; candidates who are eligible to seek admission as foreign nationals or under other categories as approved by the Council of the IITs will also be considered for admission to the

B.Tech programme in the supernumery seats reserved for this purpose, if their applications are received through proper channels and if they are qualified in JEE(Advanced).

- O.2 Admission to the particular branch of study shall be as decided by the Joint Admission Board.
- O.3 The duration of the B.Tech/ B.Tech (Honours) programme will normally be 8 semesters
- O.4 The award of merit scholarships to the B.Tech/ B.Tech (Honours) students will be governed by the regulations framed by the Senate from time to time.
- 0.5 Student can opt for B.Tech (Honours) at the end of the fourth semester of B.Tech programme subject to the conditions prescribed by the Senate from time to time.
- O.6 The award of the B.Tech/ B,Tech (Honours) degree shall be in accordance with the regulations of the Senate of the Institute

# REGULATIONS

# **R.1.0** Admission

- R.1.1 The number of seats in each branch of the B.Tech programme for which admission is to be made in the IIT Madras, will be decided by its Senate. Seats are reserved for candidates belonging to the Scheduled Castes, Scheduled Tribes, Other Backward Classes, Persons with Disability and children of defence/ paramilitary personnel killed or permanently disabled in action during war or peace-time operations, as per the Government of India orders from time to time.
- R.1.2 Admission to the B.Tech programme in any year will be based on the results of a Joint Entrance Examination(Advanced) conducted in the month of April of that year by the IITs.
- R.1.3 The eligibility criteria, consistent with ordinance O.1, for appearing at the Joint Entrance Examination (Advanced) in any year will be decided by the Joint Admission Board and the Directors of all the IITs in their capacity as Chairman of the respective Senate.

The criteria will be set out in an information brochure to be forwarded to the applicants along with the relevant application forms.

- R.1.4 The Joint Admission Board will decide on the procedure for conducting the Joint Entrance Examination(Advanced) and preparing a merit list for the general category of students and a separate merit list for candidates belonging to Scheduled Castes, Scheduled Tribes, other Backward Classes and Persons with Disabilities (PwD). Subject to minimum performance criteria in the examination decided by the committee from year to year, the Joint Admission Board will offer admission, in order of merit, from these lists to candidates, taking into account the choice of branch indicated by the candidate and the available seats in each branch in the various IITs.
- R.1.5 At the time of admission, a candidate should have appeared/ passed in the final examination of any of the following qualifying examinations:
  - Final examination of the 10+2 system, conducted by any recognized Central/State Board, such as Central Board of Secondary Education, New Delhi; Council for Indian School Certificate Examination, New Delhi, etc. OR
  - Intermediate or two-year Pre-University Examination conducted by a recognized Board/University OR
  - Two-year course of the Joint Services Wing of the National Defence Academy OR
  - General Certificate Education (GCE) Examination (London/Cambridge/Sri Lanka) at the Advanced (A) level OR
  - High School Certificate Examination of the Cambridge University OR International Baccalaureate Diploma of the International Baccalaureate office, Geneva or
  - Any Public School/Board/University Examination in India or in any foreign country recognized as equivalent to 10+2 system by the Association of Indian Universities (AIU) OR
  - ✤ H.S.C. vocational Examination OR
  - Senior Secondary School Examination conducted by the National Open Schooling with a minimum of five subjects OR

- ♦ 3 or 4 year Diploma recognized by AICTE or a State Board of Technical Education and
- in case the relevant qualifying examination is not a public examination, the candidate must have passed at least one public (Board or Pre-University) examination at an earlier level.
- Criterion 1: The candidate should be among the top 1,50,000 (all categories included) in JEE Main of respective years.

AND

Criterion 2: Candidates should be within the category -wise top 20 percentile of successful candidates in his/her respective class XII (or equivalent) Board Examination (2013 & 2014 batch) OR

He/She has secured 75% (for GEN/OBC-NCL) or 70% (for SC/ ST/PWD) of aggregate marks in the class XII (or equivalent) Board Examination .

- R.1.6 A candidate has to fulfill the medical standards required for admission as set out in the Information Brochure of JEE sent along with the application form.
- R.1.7 The selected candidate will be admitted to the B.Tech programme after he/she fulfills all the admission requirements as indicated in the letter of admission, after payment of the prescribed fees.

# R.1.8 In matters of admission to the B.Tech programme, the decision of the Joint Admission Board is final.

- R.1.9 If, at any time after admission, it is found that a candidate has not fulfilled all the requirements stipulated in the offer of admission, then the admission of the candidate may be cancelled and report the matter to the Senate.
- R.1.10 A student can have only **two attempts** to write JEE (Advanced) from 2013. Furthermore, he/she is allowed to write JEE (Advanced) only in the year in which he/she passes the qualifying examination and/or in the following year.
- R.1.11 Candidates who join any of the IITs, IT-BHU, Varanasi, and ISMU, Dhanbad through JEE (Advanced) of that year will NOT be permitted to appear in subsequent JEE (Advanced) in the following year .
- R.1.12 Students admitted to B.Tech Programme can opt for B.Tech (Honours) programme during the fourth semester. The student should have a CGPA of 8.5 and above at the end of their third semester and should have cleared all the courses as prescribed in the curriculum in the first attempt. Students who have obtained 'U' or 'W' grade in any course are not eligible for B.Tech (Honours) degree.

#### R.2.0 Structure of the B.Tech/ B.Tech (Honours) Programme

- R.2.1 (i) Curriculam consist of Science (S-Category), Engineering (E-Category), Humanities (H-Category), Professional (P-Category) and unallotted credits (U-Category).
  - (ii) Unalloted credits enable the students to take up a group of courses of interest to him/her in the parent department or other depts..

In addition, a student should satisfactorily complete the prescribed NCC/NSO/NSS programme.

- R.2.2 Every branch of the B.Tech programme will have a curriculum and course contents (syllabi) for the courses approved by the Senate.
- R.2.3. The curriculum of any branch of the B.Tech programme is designed to have credit requirement of 432±2 credits. For B.Tech (Honours) the credit requirement is 459±2.
- R.2.4 No semester shall have more than five lecture based courses and two laboratory courses (or) six theory courses without laboratory courses carrying a maximum of 60 credits.:
- R.2.5 Every course of the B.Tech/ B.Tech (Honours) programme will be placed in one of the five categories listed in Table-1. A student must earn a minimum number of credits under each category as shown below:

Category	Abbr.	B.Tech	B.Tech(Honours)
Basic Science	S	88	88
Basic Engineering	Е	46	46
Humanities	Н	27	27
Profession	Р	180	207
Unallotted	U	72	72*

\*includes 27 credits of departmental project.

The sum of the minimum credits needed in each category for the B.Tech programme, amount to 413 credits, which is smaller than the minimum total credits needed to earn a B.Tech. This is intended to give additional flexibility to departments in designing their curricula. In the same vein, the range of credits for the overall programme is intended to enhance flexibility in curriculum design

The following courses are defined as non-credit but compulsory courses NCC/NSS/NSO, Life Skills, Industrial Training, Professional ethics, Ecology and Environment etc. However the time spent in these courses will be accounted for arriving at the limit on maximum credit hours spent in a semester.

- R.2.6 In addition to B.Tech regulations specified above, the B.Tech (Honours) students must earn minimum of 27 additional P Category credits and should not have obtained 'U' or 'W' grade in any courses.
- R.2.7 B.Tech (Honours) students can register for a maximum of 2 additional P-category courses in a semester from the Honours basket of courses over and above the courses prescribed in the B.Tech curriculum from 5<sup>th</sup> semester onwards. Project work in the parent department is a must for B.Tech (Honours) students. Student who have registered for B.Tech (Honours) are permitted to register more than 60 credits per semester.
- R.2.8 The medium of instruction, examination and project reports will be English.

# R.2.9 Definition of new credit system

- (i) One credit indicates an effort of 50 minutes (1 credit-hour) per working week.
- (ii) One *credit-hour* of lecture is assumed to need two *credit-hours* (1 hour 40 minutes) outside the class room in terms of student effort to thoroughly comprehend the subject material, do the home works etc. Thus, a course with 3 lectures a week will be a  $3+(3_2) = 9$  credit course, indicating that a student needs to put in 9 *credit-hours* (7 hours 30minutes) of work a week on this course, inside and outside the classroom put together.

- (iii) A one *credit-hour* supervised session with no effort required outside should count for one credit. Thus, an afternoon (2 hours 30 minutes) laboratory session, where the student runs an experiment, collects data, interprets it and writes a report should be awarded 3 credits. If a laboratory course requires effort outside of the allotted 2.5 hour slot, appropriate credit should be awarded (1 credit for 1 *credit-hour*, *i.e.*, 50 minutes). In the same vein, a 1 *credit-hour* tutorial session should be awarded 1 credit, if no work is expected outside.
- (iv) In any given semester, a student should not be required to register for more than 60 credits. This means a maximum academic time commitment of about 50 clock hours every week.

In line with the above credit definition, sample credit mapping for typical courses/laboratory structure is summarized below:

				Credit hou	urs per week for		
Nature of Course	Lecture	Tutorial	Extended Tutorial	Afternoon LabSession		time to be spentbuttsideoficiass	Total credits in newsystem
		(b)	©	(d)	(e)	a+b+c+d+e	
Theory	3	0	0	0	3 x 2 = 6	9	
Theory + Tutorial <sup>\$</sup>	3	1	0	0	3 x 2 = 6	10	
Theory + Tutorial <sup>\$</sup>	3	1	1	0	3 x 2 = 6	11	
Theory + Lab	2	0	0	3	2 x 2 = 4	9	
Laboratory	0	0	0	3	0	3	
Laboratory	0	0	0	3	2	5	
Project	0	0	0	0	27	27	

\$ Assuming tutorial does not require any work outside

Each time unit specified in the table = 50 minutes

#### **R.3.0 Faculty Adviser**

R.3.1 To help the students in planning their courses of study and for getting general advice on the academic programme, the concerned Department will assign a certain number of students to a Faculty member who will be called their Faculty Adviser.

# **R.4.0 Class Committee**

- R. 4.1 Every class of the B.Tech programme will have a Class Committee consisting of Faculty and students. There will be one Class Committee for each of the first two semesters and for the common courses of the third semester, constituted by the Dean (Academic Courses). The Class Committees for the department courses of each semester will be constituted by the Head of the departments concerned.
- R.4.2 The constitution of the Class Committee for the first three semesters' common courses (excepting P-Category courses) will be as follows:

- (i) One professor-not associated with teaching the particular class to be nominated by the Dean of Academic Courses to act as the Chairman of the Class Committee.
- (ii) Course coordinator of each of the lecture based subjects
- (iii) Workshop in-charge.
- (iv) Topper in each batch based on JEE(Advanced) CML rank
- (v) Faculty Advisers of the respective class.

All teachers offering the common courses of first to third semester B.Tech./Dual Degree programmes, shall be invited to attend the class committee meetings.

- R.4.3 The constitution of the class committee for the department courses of each semester will be as follows:
  - (i) one professor of the Department concerned, preferably not associated with teaching of the class, to be nominated by the Head of the Department concerned, to act as the Chairman of the Class Committee.
  - (ii) all teachers of lecture-based subjects .
  - (iii) four students from the top half of the class to be chosen by the students of the class from amongst themselves
  - (iv) Faculty Advisers of the respective class.

# R.4.4 The basic responsibilities of the Class Committees are

- (a) The Class Committees shall meet at least thrice in a semester, once at the beginning of the semester, once after the II quiz and once after the end semester examination to finalize the grades.
- (b) to review periodically the progress of the classes,
- (c) to discuss issues concerning curriculum and syllabi and the conduct of the classes.
- (c) The method of assessment in the course will be decided by the teacher, in consultation with the class committee, and will be announced to the students at the beginning of the semester. Each class committee will communicate its recommendations to the Head of the Department and the Dean of Academic Courses.
- (d) The Class Committees without student members is responsible for the finalization of the semester results.

However, for the common courses in the first three semesters of the B.Tech programme the method of assessment will consist of two quizzes or mid-semester and an end semester examination with weightages specified in **R.19.1**.

# **R.5.0** Change of Branch

- R.5.1 Change of branch may be permitted subject to the following:
- R.5.2 Such change will be considered only at the end of the first semester. **The performance during the first semester will be the basis for consideration for change of branch.**

- R.5.3 All students who have successfully completed the first semester course, except Engineering Design Dual Degree students, will be eligible for consideration for change of branch, subject to the availability of vacancies.
- R.5.4 In making a change of branch, the strength of a branch should not fall below the existing strength by more than ten percent and should not go above the sanctioned strength by more than ten percent. For this purpose, the strength in both cases refers to the total strength of the students in the branch.
- R.5.5 However, a minimum of one student will be eligible for consideration for change of branch from each discipline at the end of the first semester, irrespective of the regulation 5.4
- R.5.6 If a student with a higher GPA is not offered a particular branch because of other constraints, this should not be offered to any other students with a lower GPA even if he/she is eligible on the basis of the existing norms.
- R.5.7 Dual degree students are not eligible for branch/ programme change to 4-year B.Tech programme.
- R.5.8 Change of branch rules is subject to revision from time to time and the decision of the Senate will be final and binding.

#### **R.6.0 Enrolment and Registration**

#### R 6.1 Enrolment:

**From the second semester onwards, all students have to enroll on a specified day at the beginning of a semester.** A student will be eligible for enrolment only if he / she satisfies R.10 and will be permitted to enroll only if he/she has cleared all dues to the Institute, Hostel, Library and the NCC Unit up to the end of the previous semester, provided he / she is not debarred from enrolment, on disciplinary grounds.

#### R 6.2 Registration:

Except for the first semester, registration of a semester will be done during a specified week before the end-semester examination of the previous semester.

Late registration/enrolment will be permitted with a fine as decided from time to time up to two weeks from the last date specified for registration.

- R.6.3 Registration is done through online.
- R.6.4 The B.Tech students are also eligible to take extra courses apart from the courses prescribed in the curriculum, viz, one course in 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> semester and not more than two courses in the 8<sup>th</sup> semester, subject to a maximum limit on such 'EXT' credit of 45, provided a student has no backlog and has a CGPA of 7.0 & above, at the end of the previous semester. Students taking extra courses should obtain the prior approval of the Dean (Academic Courses). This will be shown in the grade card as EXT category and will be taken for CGPA calculation.
- R.6.5 Students should have successfully completed the courses of (n minus 4)th semester to register for courses in nth semester. E.g to register for courses in 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> & 8<sup>th</sup> semester of B.Tech programme, the student should have successfully completed all the courses of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> semesters respectively, as prescribed in the curriculum of the concerned branch of study i.e This 'n-4' rule is also applicable for the Dual Degree programme of 10 semester duration.

- i. Students who have backlog courses under n-4 rule, the registration of courses shall be restricted to the average credit clearance capacity in the last two semesters. The student must register the backlog courses first giving priority to the oldest backlogs. The students will register by default for backlog courses being offered in a particular semester.
- ii. The semester used by a student to clear only the backlog course(s), will not be treated as effective for reckoning the no. of semesters spent by the student with respect to the maximum permissible limit (vide R 11.1)

# **R.7.0 Registration Requirement**

R.7.1 The curriculum for any semester shall not be required for registration of more than 60 credits.

If a student finds his/her academic/course load heavy in any semester, or for any other valid reason, he/she may drop courses if the student maintains a minimum attendance grade G in that case till the date of application, within 45 instructional days from the commencement of the semester through workflow with the approval of Faculty Advisor and Course Faculty. However, the student should ensure that the total number of credits registered in any semester should enable him/her to earn the minimum number of credits as specified in **R.10.1**.

# **R.8.0** Supplementary Examination

- R.8.1 Students who get "U" grade and attendance code "G" (Good) and above in a core course are eligible to seek Supplementary Examination.
- R.8.2 A student is eligible for only one Supplementary Examination in any course. No second chance is given. In case a student fails in the Supplementary Examination he/she has to repeat the course in a regular semester, as and when it is offered.
- R.8.3 The Supplementary Examination will be offered by the same teacher who offered the course earlier.
- R.8.4 The Supplementary Examination can be held during the makeup/supplementary week of the subsequent semester, at the convenience of the teacher concerned.
- R.8.5 For taking Supplementary Examinations, the students need not attend classes in that course once again. The same attendance code earned in the earlier examination will be retained for the Supplementary Examination.
- R.8.6 The end semester alone is given as a Supplementary Examination and the sessional marks already secured by a student in that course will be taken into account for finalizing the grade and the same cut-off for the grades shall be used.

#### **R.9.0** Contact Courses

R.9.1 A Contact course may be offered during the regular semester or during summer by a Department, **only** to a final year student who has obtained "U" grade in a CORE course.

The course will be offered **only** on the recommendation of the department, with the mutual agreement of the teacher and the student.

R.9.2 No student should register for more than two contact courses during the semester or summer period.

- R.9.3 The contact course cannot be offered if the same subject is offered as a regular course, during that period.
- R.9.4 Such final year students, who wish to take contact course(s), should apply to the Dean, Academic Courses before the commencement of the semester or summer as the case may be, in which the contact course is to be taken.
- R.9.5 The assessment procedure for a contact course will be similar to that of the regular semester course.
- R.9.6 Withdrawal from a contact course is not permitted.

#### **R.10.0** Minimum Requirement to Continue the Programme and Readmission

R.10.1 A student should earn not less than 30 credits in the first semester, and 68 credits at the end of the second semester.

Thereafter, he/she must maintain an average of 36 credits per semester, including the first two semesters, to continue his/ her studies.

However, in the final semester, a student may earn less than 36 credits if it is sufficient for him/ her to fulfill the requirements for the award of the degree.

If a student fails to earn credits every semester as stated above, he/she will be relieved from the programme at the end of the semester.

- R.10.2 A student who has not completed the NCC / NSO / NSS requirements (see R.27) in the first four semesters will not be permitted to continue the B.Tech programme.
- R.10.3 A student should have a minimum CGPA of 5.0 (see R.26.2), calculated for the courses successfully completed at the end of each semester. If the CGPA so calculated is below 5.0 or if he/she earns less than the required average credits, the student will be issued a warning under intimation to the parent.

When there is a reduction in GPA between two successive semesters, then the FA, HoD and the parent will be initimated.

In the following semester, if the CGPA is less than 5.0 or the student could not maintain required average credits, as per **R.10.1**, he/she will be relieved from the programme at the end of the semester.

#### 10.4 Readmission

The students who do not satisfy the minimum requirement vide R.10.1 and relieved from the programme may seek readmission to Dean, Academic courses with recommendation from Faculty Advisor and Head of the Department.

#### **R.11.0 Maximum Duration of the Programme**

R.11.1 A student is expected to complete the B.Tech programme in eight semesters. However a student may complete the programme at a slower pace, but in any case not more than 12 semesters, excluding semesters withdrawn on medical grounds, etc. as per R.12.1. However the students have to satisfy R.10.1 every semester, failing which their registration will be cancelled.

# **R.12.0** Temporary Withdrawal from the Programme

R.12.1 A student may be permitted by the Dean of Academic Courses to withdraw from the programme for a semester or longer for reasons of ill health or other valid reasons. Normally, a student will be permitted to withdraw from the programme only for a maximum continuous period of two semesters.

# **R.13.0 Discipline**

- R.13.1 Every student is required to observe discipline and decorous behaviour both inside and outside the campus and not to indulge in any activity which will tend to bring down the prestige of the Institute.
- R.13.2 Any act of indiscipline of a student reported to the Dean, Academic Courses, will be referred to a **Discipline and Welfare Committee constituted by the Senate.**

The Committee will enquire into the charges and recommend suitable punishment if the charges are substantiated. The Senate will consider the recommendation of the Discipline and Welfare Committee for appropriate action. The committee will report the action taken at the next meeting of the Senate.

- R.13.3 Appeal: The student may appeal to the Chairman, Senate, whose decision will be final.
- R. 13.4 Ragging of any dimension is a criminal and non-bailable offence in our country. The current State and Central legislations provide for stringent punishment, including imprisonment. Once the involvement of a student is established in ragging, the offending student will be dismissed from the Institution and will not be admitted into any other Institution. Avenues also exist for collective punishment, if individuals can not be identified in this inhuman act. Every senior student of the Institute, along with the parent, shall give an undertaking every year in this regard and this should be submitted at the time of enrolment.

#### **R.14.0** Attendance

R.14.1 Every teaching staff member handling a class will take attendance till the last instructional day in the Semester. The percentage of attendance, calculated up to this point, will be indicated by a letter code as follows:

Attendance Rounded to	Remarks	Code
≥ 95%	Very Good	VG
85 to 94%	Good	G
< 85%	Poor	Р

R.14.2 A student who has an attendance lower than 85%, whatever may be the reason for the shortfall in attendance, will not be permitted to appear in the end-semester examination of the course in which the shortfall exists.

His/her registration for that course will be treated as cancelled, and he/she shall be awarded 'W' grade (W stands for registration cancelled for want of minimum attendance) in that subject. This grade shall appear in the grade card till the course is successfully completed.

In the case of a core course, the student should register for and repeat the course when it is offered next.

R.14.3 The teacher handling a course must finalise the attendance 3 calendar days before the last instructional day of the course in the semester.

The particulars of all students who have attendance less than 85% in that course must be announced in the class by the teacher himself/ herself. Copies of the same should be sent to the Dean, Academic Courses and Heads of Departments concerned. Students who get less than 85% should not be permitted to sit for the end-semester exam without the permission of the Dean Academic Courses.

- R.14.4 Condonation of Attendance: Every student is expected to put in 100% attendance. The minimum-attendance requirement is 85%. For cases of casual absenteeism, no condonation of attendance is permissible. If a student has less than 85% attendance, he/she should be assigned 'W' grade in that subject along with 'P' as the attendance code. The percentage of attendance in a subject shall be computed as:
  - (a) For calculation of attendance in normal cases:

For cases of minor illnesses and casual absenteeism actual % of attendance is computed as:

Actual no. of classes attended x 100

Total no. of classes held till date of compilation of attendance

which should be  $\geq$  85%. Otherwise, W grade shall be awarded. Such cases will not come under the purview of condonation of attendance.

(b) For calculation of attendance in case of prolonged illness and/or hospitalization with medical certificate:

A student should have more than 40% attendance calculated as per (a) above to be eligible for condonation.

Notional % of attendance =

Actual no. of classes attended x 100

(Total no. of classes held in the semester) - (No. of classes held during the days of prolonged illness and or hospitalization)

which should be  $\geq 85\%$  for condonation

#### **R.15.0** Assessment Procedure – Tests and Examinations

R.15.1 The Senate will decide from time to time on the system of tests and examinations in each subject in each semester. The current practice is the following:

#### **R.16.0** System of Tests

- R.16.1 In lecture based courses, **two quiz tests** will be held in the case of common courses of first three semesters and for higher semester courses as decided by the Class Committee. The details of weightage of marks for these quizzes have to be announced to the students, in consultation with the Class Committee. The Dean of Academic Courses should be informed of the scheme of evaluation at the beginning of the semester.
- R.16.2 The adoption of mid -semester examination for the common courses of I to III semesters may be considered by the Heads of Departments concerned.

# **R.17.0 End Semester Examination**

R.17.1 There will be one end-semester examination of three hours duration in each lecture based subject.

# **R.18.0 Project Evaluation**

- R.18.1 At the completion of a project, the student will submit a project report which will be evaluated by duly appointed examiner(s). The evaluation will be based on the report and a viva-voce examination on the project.
- R.18.2 The project reports of B.Tech students who have not completed their course work will be evaluated in that semester itself and the result sent, in confidential, to the Dean, Academic Courses. The result of the project work evaluation will be declared by the Dean, Academic Courses only after the successful completion of the course requirements.

# **R.19.0** Weightages

R.19.1 The following will be the weightages for different subjects:

a)	For common courses of first three semesters:	
	2 Quizzes – 20 marks each	40%
	End Semester Examination	60%
b)	Laboratory based subjects:	
	For Laboratory based subjects, an end	
	semester examination may or may not be held	
	Sessional Assessment	75–100%
	Practical examination must be conducted for	25%
	all the lab courses. End-semester examination,	
	if held: Maximum weightage	

#### For higher semester courses:

The weightage for theory courses of higher semesters of the B.Tech programme should not be below 40% each for both sessional assessment and end semester examination. Subject to the above constraint, the Class Committee is free to decide the weightages in any course and announce to the students within 2 weeks from the beginning of the semester. The Class Committee can approve specific requirement for a course appropriately.

R.19.2 The markings for all tests, tutorial assignments (if any), laboratory work and examinations will be on an absolute basis. The final percentages of marks are calculated in each subject as per the weightages given in **R.19.1**.

# **R.20.0 Make-up Examination**

R.20.1 Students who have missed the quizzes or end-semester examination for valid reasons are eligible for a make-up examination.

A student who has missed quiz(zes) and the end semester examination in the same course due to genuine reasons like illness etc. may be permitted to write a make-up examination for the missed end-semester alone and awarded zero marks for the missed quiz(zes), provided the student satisfies the attendance requirements.

The students should make an application to the Dean, Academic Courses 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.

R.20.2 Official permission to take a make-up examination will be given under exceptional circumstances such as admission to a hospital due to illness.

Students residing in the Hostels should produce a Medical Certificate issued by the Chief Medical Officer of the Institute that he/she was admitted in 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.** 

R.20.3 A slot- wise make -up examination will be held during the makeup / supplementary week as per Academic Calendar of subsequent semester for those who are permitted to take the make-up examination.

The question paper will be common to all the students taking make-up examinations in a given subject. However, the question paper will be so structured that a student will be required to answer only parts of the paper carrying marks in proportion to the weightages of the tests / examinations missed by him / her.

R.20.4 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 Academic Courses or with approval of the Senate may permit the student to appear for a second make-up examination.

#### **R.21.0 Subject-wise Grading of Students**

#### R.21.1 Letter Grades

Based on the performance, each student is awarded a final letter grade at the end of the semester, in each subject. The letter grades and the corresponding grade points are as follows:

Grade	<b>Grade Points</b>	Remarks
S	10	
А	9	
В	8	
С	7	
D	6	
Е	4	
U	0	
Р	-	Pass
F	0	Fail
W	0	Failure due to insufficient attendance in course
T	0	Incomplete (subsequently to be changed into
1	U	pass (E to S) or U grade in the same semester).
X	0	Completed NSO/NCC/NSS requirements
Y	0	Incomplete (in NSO/NCC/NSS)

R.21.2 A student is considered to have completed a subject successfully and earned the credits if he/she secures a letter grade other than U/ F or W or I in that subject. A letter grade U/F or W in any subject implies a failure in that subject.

# **R.22.0 Method of Awarding Letter Grades**

- R.22.1 A final meeting of the **class committee** without the student members will be convened within **seven days after the last day of the end semester examination**. The letter grades to be awarded to the students for different courses will be finalized at this meeting.
- R.22.2 The faculty member shall upload grade through workflow and the Chairman of Class Committee approve the grade within the senate prescribed deadline specified in the academic calendar.

# **R.23.0 Declaration of Results**

- R.23.1 After finalization by the Class Committee the letter-Grade awarded to the students will be uploaded through online by the teachers. After online approval by the Chairperson of the respective Class Committee, it will be available in academic website for the students to view their grades.
- R.23.2 The **W** grade once awarded stays in the record of the student and is deleted when he/she completes the subject successfully later. The grade acquired by him/her will be indicated in the grade card of the appropriate semester with an indication of number of attempts made in that course.
- R.23.3 'U' grade obtained by the students will be deleted in the grade card once that course is successfully completed. The grade acquired by the students will be indicated in the grade card of the appropriate semester indicating also the number of attempts made in that course.

# **R.24.0 Re-examination of Answer Papers**

R.24.1 In case any student feels aggrieved, he/she can contact the teacher concerned within three weeks from the commencement of the semester immediately following the announcement of the results.

The student shall have access to his/her answer paper(s) in the end semester examination which may be shown to him/her by the teachers concerned. If the teacher feels that the case is genuine, he/she may re-examine the case and upload a revised grade, if any, through workflow. After approval by HoD and Dean(Academic Courses) the revised grade will be reflected in the grade card.

#### **R.25.0** Course Repetition

R.25.1 A student who earns a U or W grade in a core course has to repeat it compulsorily when the course is offered next.

A student securing a U or W grade in an elective course, may repeat it if he/she so desires to get a successful grade.

R.25.2 A course successfully completed can not be repeated. In some cases where students have taken all core and elective courses but still fail to minimum CGPA of 5.0 and thus will not be eligible to get degree. In such cases the student be permitted to repeat the core or elective courses to earn the minimum CGPA.

*Option can also be given to such students to select courses to be considered for calculating CGPA for eligibility for award of degree.* 

# **R.26.0 Grade Card**

R.26.1 The grade card issued at the end of the semester to each student will contain the following:

- a) The course number, name of the course and the credits for each course registered in that semester.
- b) the letter grade obtained in each course
- c) the attendance code in each course
- d) the total number of credits earned by the student upto the end of that semester in each of the course categories
- e) the Cumulative Grade Point Average (CGPA) of all the courses taken from the first semester.

R.26.2 The GPA will be calculated according to the formula:

$$GPA = \frac{i(C_i \times GP)}{iC_i}$$

Where  $C_i$  = credit for the course, GP = the grade point obtained for the course and  $_i C_i$  = the sum of credits of all courses taken in that semester, including those in which the student has secured U and W grades.

For the cumulative grade point average (CGPA), a similar formula is used where the sum  $_{i}C_{i}$  is the sum of credits of all courses taken in all the semesters completed up to the point in time.

The **CGPA based on the successfully completed courses** is calculated, deleting the 'U' or 'W' grades, and **is also shown separately in the grade card**.

R.26.3 No class or division or rank will be awarded to the students at the end of their B.Tech programme. However, for conversion of (i) CGPA into percentage and (ii) Percentage to CGPA for admission purpose as well as for issuing certificate to the alumni for their professional carrier purpose, the Senate has approved the following conversion formula: Percentage = 55 + 10 ((CGPA) – 6).

#### R.27.0 NCC / NSO / NSS Requirements

- R.27.1 All students admitted to the B.Tech programme will have to take either NCC or NSO or NSS as a non-credit extra-curricular programme. NCC programme is not available for Foreign nationals and women students.
- R.27.2 The NCC / NSO / NSS requirement should be completed within the first two semesters.
- R.27.3 Attendance requirement with as per clause R14.1.
- R.27.4 If a student falls short of the attendance requirements he / she should make up the deficiency as noted below:
  - (i) If the absence is on valid grounds, the deficiency will be made up through extra sessions.
  - (ii) If the absence is unauthorized, the deficiency will have to be made up during the following year. The deficiency in NCC will have to be made up in NSO / NSS

programmes at the rate of four times the deficiency, i.e., each NCC / NSS class missed will be made up by four NSO classes.

(iii) The deficiency in NSO / NSS classes will have to be made up at the rate of two classes for each class missed.

# **R.28.0 Scholarships and Tuition Fee Exemption**

R.28.1 25% of the students admitted or 25% of the sanctioned strength, whichever is less, will be awarded Merit-Cum-Means (MCM) scholarship for the entire duration of the programme subject to the terms and conditions and at the rates approved by the Government of India from time to time.

These students are exempted from paying tuition fees.

In addition, 10% of the students admitted or 10% of the sanctioned strength, whichever is less, are exempted from payment of tuition fees for the duration of the programme.

In the cases of scholarships provided by private organisations, the rates and terms and conditions for the award of such scholarship shall be as approved by the Senate.

In the case of the SC / ST candidates all are exempted from payment of tuition fees. The award of scholarships and other benefits will be in accordance with the rules framed by the Government of India.

The Dean of Academic Courses will lay down the administrative procedures to be followed in the selection of the students for the award of the scholarships consistent with existing Government regulations if any. The number and names of the selected candidates will be reported to the Senate.

#### **R.29.0 Eligibility for Award of the B.Tech Degree**

R.29.1 A student shall be declared to be eligible for award of the B.Tech degree if he/she has

- a) registered and successfully completed all the core courses and projects;
- b) successfully acquired the minimum required credits as specified in the curriculum corresponding to the branch of his/ her study within the stipulated time;
- c) earned the specified credits in all the categories of subjects;
- d) completed the NCC / NSO / NSS requirements;
- e) secured a CGPA of 5.0 in passed subjects only.
- f) no dues to the Institute, Hostels, Libraries, NCC / NSS / NSO etc. and

g) no disciplinary action is pending against him / her.

#### Procedure for credit transfer for students visiting Universities abroad

The following procedure will be followed for credit transfer for students visiting Universities abroad under Exchange programme of NUS/DAAD or any other University, with effect from Jan-May 2008 semester:

The credits / grades indicated in the grade sheet obtained from the university in which the student has completed the courses should be used by the student as part of his/her transcripts.

IIT Madras transcripts will only indicate the courses, credits and grades completed at IITM and the total no. of credits (without grades) earned in other Universities in a particular semester.

# The CGPA calculation based on credits earned/completed at IIT Madras alone is to be considered for award of prizes.

The credits earned at Universities abroad will be taken into account for calculation of minimum required credits for the award of the degree.

# R.30.0 Eligibility for Award of the B.Tech (Honours) Degree

- R.30.1 In addition to the conditions prescribed under R.2.6, the B.Tech (Honours) students must maintain a CGPA of 8.5 from 4<sup>th</sup> semester. Otherwise, they will be awarded only B.Tech Degree.
- R.30.2 Extra credits earned by the students will be counted for prizes and awards.
- R.30.3 The award of the degree must be recommended by the Senate and approved by the Board of Governors of the Institute.

# **R.31.0** Power to Modify

R.31.1 Notwithstanding all that has been stated above, the Senate has the right to modify any of the above regulations from time to time.

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**ORDINANCES AND REGULATIONS** 

(Applicable from 2015 batch onwards)

Dual Degree (B.Tech & M.Tech) / Dual Degree [B.Tech(Honours) & M.Tech]/ Dual Degree (BS & MS)/Dual Degree (BS (Honours) & MS)



INDIAN INSTITUTE OF TECHNOLOGY MADRAS CHENNAI – 600 036

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Revised up to 269<sup>th</sup> Senate held on 2-09-2015

# Dual Degree (B.Tech and M.Tech) /

# Dual Degree [B.Tech(Honours) & M.Tech ]/ Dual Degree (BS & MS)/Dual Degree (BS (Honours) & MS)

# **ORDINANCES**

#### O.1 Candidates should have passed

- Final examination of the 10+2 system, conducted by any recognized Central/ State Board, such as Central Board of Secondary Education, New Delhi; Council for Indian School Certificate Examination, New Delhi, etc. OR
- Intermediate or two-year Pre-University Examination conducted by a recognized Board/University OR
- Final Examination of the two-year course of the Joint Services Wing of the National Defence Academy OR
- General Certificate Education (GCE) Examination (London/Cambridge/Sri Lanka) at the Advanced (A) Level OR
- High School Certificate Examination of the Cambridge University or International Baccalaureate Diploma of the International Baccalaureate office, Geneva or
- Any Public School/Board/University examination in India or in any foreign country recognized as equivalent to 10+2 system by the Association of Indian Universities (AIU) OR
- ✤ H.S.C. Vocational Examination OR
- Senior Secondary School Examination conducted by the National Open schooling with a minimum of five subjects OR
- ♦ 3 or 4 year Diploma recognized by AICTE or a State Board of Technical Education and
- In case the relevant qualifying examination is not a public examination, the candidate must have passed at least one public (Board or Pre-University) examination at an earlier level.

The candidate should be among the top 1,50,000 (all categories included) in JEE (Main) of the respective years and should satisfy <u>at least one of these two criteria</u>:

- I. He/she is within the category-wise top 20 percentile of successful candidates in his/her respective Class XII (or equivalent) board examination.
- II. He/she has secured 75% (for GEN or OBC-NCL) or 70% (SC, ST or PwD) of aggregate marks in the Class XII (or equivalent) board examination
- The marks scored in the following five subjects will be considered for calculating the aggregate marks and the cut-off marks for fulfilling the top 20 percentile criterion: (1) Physics, (2) Chemistry, (3) Mathematics, (4) a language (if the candidate has taken more than one language, then the language with the higher marks will be considered), and (5) any subject other than the above four (the subject with the higher marks will be considered).

- ✤ In case any of the subjects Physics, Chemistry, Mathematics and Language are not evaluated in the final year (e.g., in a 3-year diploma course), then the marks for the same subject from the previous year will be used for calculating the top 20 percentile cut-off and percentage of aggregate marks.
- Candidates who have failed in one or more subjects in the Class XII (or equivalent) examination will have to reappear for all the subjects in subsequent year.
- For candidates who appeared for the Class XII (or equivalent) Board Examination, but reappeared in all subjects in subsequent year, the best of two performances will be considered.
- If a Board awards only letter grades without providing an equivalent percentage of marks on the grade sheet, the candidate should obtain a certificate from the Board specifying the equivalent marks and submit it at the time of online acceptance of the allocated seat. In case such a certificate is not provided, the decision taken by the Joint Implementation. Committee of JEE (Advanced) will be final.
- If a Board gives aggregate marks considering both Class XI and Class XII examinations (in the 10+2 system), then only the Class XII marks will be considered. If a Board gives aggregate marks considering the results of all three years of a 3-year diploma or courses of equivalent duration, then only the marks scored in the final year will be considered. Similarly, for Boards which follow a semester system, the marks scored in the final two semesters will be considered.
- If a Board does not give marks scored in individual subjects but gives only the aggregate marks, then the aggregate marks given by the Board will be considered as such.
- The criteria, as specified above, is applicable "in toto" to all the candidates including foreign nationals.

#### Regarding the cut-off marks for the top 20 percentile

- The category-wise cut-off marks for the top 20 percentile are calculated based on the marks scored by all the "successful" candidates in their respective boards.
- The cut-off marks for PwD candidates will be the same as the lowest of the cut-off marks for GEN, OBC-NCL, SC and ST categories.
- The top 20 percentile cut-off marks of an year of the respective Boards only will be considered for candidates who pass the Class XII (or equivalent) examination in that year and not cut-off marks of subsequent year.
- In case a Board does not provide information about the cut-off for the top 20 percentile, the candidate will have to produce a certificate from the respective Board stating that he/she falls within the top 20 percentile of successful candidates. If the candidate fails to do so, then the cut-off marks for the CBSE will be used.

and

Candidates who have been placed in the final merit list in the JEE (Advanced) administered jointly IITs are eligible to be considered for admission to the B.Tech/Dual Degree programme in the year in which the JEE (Advanced) is held.

In addition; candidates who are eligible to seek admission as foreign nationals or under other categories as approved by the Council of the IITs will also be considered for admission to the B.Tech programme in the supernumery seats reserved for this purpose if their applications are received through proper channels and if they are qualified in JEE (Advanced).

- O.2 Admission to the particular branch of study shall be as decided by the Joint Admission Board.
- O.3 The duration of the Dual Degree programme will normally be 10 semesters.
- O.4 The award of merit scholarships to the Dual Degree students for the first 8 semesters will be governed by the regulations framed by the Senate from time to time.
- O.5 The award of *Half-time Teaching Assistantship* (*HTTA*) to the dual degree students for IX and X semester shall be in accordance with the regulations of the Senate of the Institute.
- O.6 The successful completion of the requirements of the Dual Degree programme by the students will qualify him/her for the Dual Degree referred to as the B.Tech and M.Tech /BS & MS of the Institute.
- O.7 Student can opt for Dual Degree [B.Tech(Honours) & M.Tech]/(BS (Honours) & MS) at the end of the fourth semester of Dual Degree programme subject to the conditions prescribed by the Senate from time to time.
- O.8 The award of the Dual Deghree (B.Tech & M.Tech)/ Dual Deghree (B.Tech (Honours) & M.Tech)/Dual Degree (BS & MS)/ Dual Degree (BS (Honours) & MS) shall be in accordance with the regulation of the senate of the Institute.

# REGULATIONS

# **R.1.0** Admission

- R.1.1 The number of seats in each area of specialization and branch of the Dual Degree (B.Tech & M.Tech)/(BS & MS) programme for which admission is to be made in the IIT Madras, will be decided by its Senate. Seats are reserved for candidates belonging to the Scheduled Castes, Scheduled Tribes, Other Backward Classes, Persons with Disability and children of defence/ paramilitary personnel killed or permanently disabled in action during war or peace-time operations, as per the Government of India orders from time to time.
- R.1.2 Admission to the Dual Degree programme in any year will be based on the results of a Joint Entrance Examination (Advanced) conducted in the month of April of that year by the IITs.
- R.1.3 The eligibility criteria, consistent with ordinance O.1, for appearing at the Joint Entrance Examination (Advnced), in any year will be decided by the Joint Admission Board and the Directors of all the IITs in their capacity as Chairman of the respective Senate.

The criteria will be set out in an information brochure to be forwarded to the applicants along with the relevant application forms.

- R.1.4 The Joint Admission Board will decide on the procedure for conducting the Joint Entrance Examination (Advanced) and preparing a merit list for the general category of students and a separate merit list for candidates belonging to Scheduled Castes, Scheduled Tribes, other Backward Classes and Persons with Disabilities (PwD). Subject to minimum performance criteria in the examination decided by the committee from year to year, the Joint Admission Board will offer admission, in order of merit, from these lists to candidates, taking into account the choice of branch indicated by the candidate and the available seats in each branch in the various IITs.
- R.1.5 At the time of admission, a candidate should have appeared/ passed in the final examination of any of the following qualifying examinations:
  - 0.5 Final examination of the 10+2 system, conducted by any recognized Central/State Board, such as Central Board of Secondary Education, New Delhi; Council for Indian School Certificate Examination, New Delhi, etc. OR
  - 0.6 Intermediate or two-year Pre-University Examination conducted by a recognized Board/University OR
  - 0.7 Two-year course of the Joint Services Wing of the National Defence Academy OR
  - General Certificate Education (GCE) Examination (London/Cambridge/Sri Lanka) at the Advanced (A) level OR
  - High School Certificate Examination of the Cambridge University OR International Baccalaureate Diploma of the International Baccalaureate office, Geneva or

Any Public School/Board/University Examination in India or in any foreign country recognized as equivalent to 10+2 system by the Association of Indian Universities (AIU) OR

- ✤ H.S.C. vocational Examination OR
- Senior Secondary School Examination conducted by the National Open Schooling with a minimum of five subjects OR

- ♦ 3 or 4 year Diploma recognized by AICTE or a State Board of Technical Education and
- in case the relevant qualifying examination is not a public examination, the candidate must have passed at least one public (Board or Pre-University) examination at an earlier level.
- Criterion 1: The candidate should be among the top 1,50,000 (all categories included) in JEE Main of respective years.

and

Criterion 2: Candidates should be within the category-wise top 20 percentile of successful candidates in his/her respective class XII (or equivalent) Board Examination (2013 & 2014 batch) OR

He/She has secured 75% (for GEN/OBC-NCL) or 70% (for SC/ ST/PWD) of aggregate marks in the class XII (or equivalent) Board Examination .

- R.1.6 A candidate has to fulfill the medical standards required for admission as set out in the Information Brochure of JEE sent along with the application form.
- R.1.7 The selected candidate will be admitted to the Dual Degree programme after he/she fulfills all the admission requirements as indicated in the letter of admission, after payment of the prescribed fees.
- R.1.8 A student can have only **two attempts** to write JEE (Advanced). Furthermore, he/she is allowed to write JEE (Advanced) only in the year in which he/she passes the qualifying examination and/or in the following year.
- R.1.9 Candidates who join any of the IITs, IT-BHU, Varanasi, and ISMU, Dhanbad through JEE of that year will NOT be permitted to appear in subsequent JEE(Advanced) in the following year. .
- **R.1.10** In matters of admission to the Dual Degree (B.Tech & M.Tech) programme, the decision of the Joint Admission Board is final.
- R.1.11 If, at any time after admission, it is found that a candidate has not fulfilled all the requirements stipulated in the offer of admission, the Dean of Academic Courses may revoke the admission of the candidate may be cancelled and report the matter to the Senate.
- R.1.12 The students who have valid GATE (Graduate Aptitude Test in Engineering) score and earned minimum credits prescribed by the senate at the end of eighth semester are eligible for HTTA (Half-time Teaching Assistantship) for their IX and X semesters. The students of final year Dual Degree programme who are not having valid GATE score would also be entitled to HTTA from the IX semester onwards, in case, they get a CGPA of 8.0 or above on a scale of 10 (Ministry's Letter No. F.23- 1/2002-TS.1 dated 11.03.2003) or CGPA of 7.5 or above for SC/ST students and earned minimum credits prescribed by the senate at the end of eighth semester..
- R.1.13 Students admitted to Dual Degree (B.Tech & M.Tech)/Dual Degree (BS & MS) programme can opt for Dual Degree [B.Tech(Honours) & M.Tech ]/[BS(Honours) & MS] during the fourth semester. The student should have a CGPA of 8.5 and above at the end of their third semester and should have cleared all the courses as prescribed in the curriculum in the first attempt. Students who have obtained 'U' or 'W' grade in any course are not eligible for Honours degree.

#### **R.2.0** Structure of the Dual Degree Programme

- R.2.1 Every branch of the Dual Degree programme will have a curriculum and course contents (syllabi) for the courses approved by the Senate.
- R.2.2 (i) The programme of instruction will consist of Science (S-Category), Engineering (E-Category), Humanities (H-Category), Professional (P-Category) and unallotted credits (U-Category)

(ii) Unalloted credits enable the students to take up a group of courses of interest to him/her in the parent department or other depts. and

(iii) Project in IX and X semesters in the parent department as approved by dept.

In addition, a student should satisfactorily complete the prescribed NCC/NSO/NSS programme.

- R.2.4. The curriculum of any branch of the Dual Degree programme is designed to have  $553 \pm 2$  credits for the award of the Dual Degree degree. For Dual Degree with B.Tech (Honours)/BS (Honours) the credit requirement is  $580 \pm 2$ .
- R.2.5 No semester shall have more than five lecture based courses and two laboratory courses or six theory courses without laboratory courses carrying a maximum of 60 credits.
- R.2.6 Every course of the Dual Degree programme will be placed in one of the five categories listed in Table-1. A student must earn a minimum number of credits under each category as shown below:

Category	Abbr.	B.Tech+M.Tech	B.Tech(Hons) + M.Tech	<b>B.S.</b> + <b>M.S.</b>	<b>B.S.</b> (Hons) + M.S.
Basic Science	S	88	88	88	88
Basic Engineering	Е	46	46	12	12
Humanities	Н	27	27	27	27
Profession*	Р	301	328	301	301
Unallotted	U	72	72	72	72

\*Include 85 credits of project in the parent department

The sum of the minimum credits needed in each category for the B.Tech programme, amount to 413 credits, which is smaller than the minimum total credits needed to earn a B.Tech. This is intended to give additional flexibility to departments in designing their curricula. In the same vein, the range of credits for the overall programme is intended to enhance flexibility in curriculum design

However the time spent in these courses will be accounted for arriving at the limit on maximum credit hours spent in a semester.

The following courses are defined as non-credit but compulsory courses NCC/NSS/NSO, Life Skills, Industrial Training, Professional ethics, Ecology and Environment etc.

- R.2.7 The medium of instruction, examination and project reports will be **English**.
- R.2.8 In addition to Dual Degree regulations specified above, the Dual Degree (Honours) students must earn minimum 27 additional credits P-category credits and should not have obtained 'U' or 'W' grade in any courses.

R.2.9 Dual Degree (Honours) students can register for a maximum of 2 additional PMT courses in a semester from the Honours basket of courses over and above the courses prescribed in the Dual Degree curriculum from 5<sup>th</sup> semester onwards. Student who have registered for B.Tech (Honours) are permitted to register more than 60 credits per semester.

# R.2.10 Definition of new credits system

- (i) One credit indicates an effort of 50 minutes (1 credit-hour) per working week.
- (ii) One *credit-hour* of lecture is assumed to need two *credit-hours* (1 hour 40 minutes) outside the class room in terms of student effort to thoroughly comprehend the subject material, do the home works etc. Thus, a course with 3 lectures a week will be a  $3+(3_2) = 9$  credit course, indicating that a student needs to put in 9 *credit-hours* (7 hours 30minutes) of work a week on this course, inside and outside the classroom put together.
- (iii) A one *credit-hour* supervised session with no effort required outside should count for one credit. Thus, an afternoon (2 hours 30 minutes) laboratory session, where the student runs an experiment, collects data, interprets it and writes a report should be awarded 3 credits. If a laboratory course requires effort outside of the allotted 2.5 hour slot, appropriate credit should be awarded (1 credit for 1 *credit-hour*, *i.e.*, 50 minutes). In the same vein, a 1 *credit-hour* tutorial session should be awarded 1 credit, if no work is expected outside.
- (iv) In any given semester, a student should not be required to register for more than 60 credits. This means a maximum academic time commitment of about 50 clock hours every week.

In line with the above credit definition, sample credit mapping for typical courses/laboratory	
structure is summarized below:	

			C	Credit hour	s per week for	
Nature of Course	Lecture	Tutorial	Extended Tutorial	Afternoon Lab Session	Time to be spent outside of class	Total credits in new system
		(b)	©	(d)	(e)	a+b+c+d+e
Theory	3	0	0	0	3 x 2 = 6	9
Theory + Tutorial <sup>\$</sup>	3	1	0	0	3 x 2 = 6	10
Theory + Tutorial <sup>\$</sup>	3	1	1	0	3 x 2 = 6	11
Theory + Lab	2	0	0	3	2 x 2 = 4	9
Laboratory	0	0	0	3	0	3
Laboratory	0	0	0	3	2	5
Project	0	0	0	0	27	27
S Assuming tutorial does not require any work outside						

\$ Assuming tutorial does not require any work outside

Each time unit specified in the table = 50 minutes

# **R.3.0** Faculty Adviser

R.3.1 To help the students in planning their courses of study and for getting general advice on the academic programme, the concerned Department will assign a certain number of students to a Faculty member who will be called their Faculty Adviser.

# **R.4.0** Class Committee

- (a) 4.1 The composition of the Class Committee for the first eight semesters will be as in the case of B.Tech programme and for IX and X semesters as in the case of M.Tech programme.
- R.4.2 The constitution of the Class Committee for the common courses (excepting P-category) of the first three semesters' will be as follows:
  - a. One professor (not associated with teaching the particular class) will be nominated by the Dean of Academic Courses to act as the Chairman of the Class Committee.
  - b. Course coordinator of each of the lecture based subjects
  - c. Workshop in-charge
  - d. Topper in each batch based on JEE (Advanced) CML rank.
  - e. Faculty Advisers of the respective class.

All teachers offering the common courses of first to third semester B.Tech/Dual Degree programmes, shall be invited to attend the class committee meetings.

- R.4.3 The constitution of the class committee for the department courses of each semester will be as follows:
  - (i) one professor of the Department preferably not associated with teaching of the class, to be nominated by the Head of the Department to serve as the Chairman of the Class Committee.
  - (ii) all teachers of lecture-based subjects.
  - (iii) four students from the top half of the class to be chosen by the students of the class from amongst themselves
  - (iv) Faculty Advisers of the respective class.

#### R.4.4 The basic responsibilities of the Class Committees are

- a. The Class Committees shall meet at least thrice in a semester, once at the beginning of the semester, once after the II quiz and once after the end semester examination to finalize the grades.
- b. to review periodically the progress of the classes,
- c. to discuss issues concerning curriculum and syllabi and the conduct of the classes.
- d. The method of assessment in the course will be decided by the teacher, in consultation with the class committee, and will be announced to the students at the beginning of the semester. Each class committee will communicate its recommendations to the Head of the Department and the Dean of Academic Courses.
- e. The Class Committees without student members is responsible for the finalization of the semester results.

However, for the common courses in the first three semesters, the method of assessment will consist of two quizzes or mid-semester and an end semester examination with weightages specified in R.19.1.

# **R.5.0** Change of Branch

Change of branch may be permitted subject to the following:

- R.5.1 Such change will be considered only at the end of the first semester. The performance during the first semester will be the basis for consideration for change of branch.
- R.5.2 All students who have successfully completed the first semester courses, except Engineering Design Dual Degree students, will be eligible for consideration for change of branch, subject to the availability of vacancies.
- R.5.3 In making a change of branch, the strength of a branch should not fall below the existing strength by more than ten percent and should not go above the sanctioned strength by more than ten percent. For this purpose, the strength in both cases refers to the total strength of the students in the branch.
- R.5.4 However, a minimum of one student will be eligible for consideration for change of branch from each discipline at the end of the first semester, irrespective of the regulation 5.3
- R.5.5 If a student with a higher GPA is not offered a particular branch because of other constraints, this should not be offered to any other students with a lower GPA even if he/she is eligible on the basis of the existing norms.
- R.5.6 All the students will have to exercise their option for specialization within the streams offered by the parent department only at the end of 6<sup>th</sup> semester (at the end of 4<sup>th</sup> semester in the case of Dual Degree in Engineering Design) and not at the time of admission counseling. However, streams offered in Applied Mechanics will be treated as one of the streams for CE, EE ad OE students. Allotment of specialization will be done by the department based on the performance of the student at the end of 6<sup>th</sup> semester.
- R.5.7 Dual degree students are not eligible for branch / programme change to 4-year B.Tech programme.
- R.5.8 Change of branch rules is subject to revision from time to time and the decision of the Senate will be final and binding.

# **R.6.0** Enrolment and Registration

#### R 6.1 Enrolment:

**From the second semester onwards, all students have to enroll on a specified day at the beginning of a semester.** A student will be eligible for enrolment only if he / she satisfies R.10 and will be permitted to enroll only if he/she has cleared all dues to the Institute, Hostel, Library and the NCC Unit up to the end of the previous semester, provided he/she is not debarred from enrolment, on disciplinary grounds.

#### R 6.2 **Registration:**

Except for the first semester, registration of a semester will be done during a specified week before the end-semester examination of the previous semester.

Late registration/enrolment will be permitted with a fine as decided from time to time up to two weeks from the last date specified for registration.

R.6.3 Registration is done through online.

- R.6.4 The Dual Degree students are also eligible to take extra courses apart from the courses prescribed in the curriculum, viz., , one course in 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> ; and not more than two courses in the 9<sup>th</sup> & 10<sup>th</sup> semesters, subject to a maximum limit on such 'EXT' credit of 45, provided a student has no backlog and has a CGPA of 7.0 & above, at the end of the previous semester. Students taking extra courses should obtain the prior/approval of the Dean (Academic Courses). This will be shown in the grade card as EXT category and will be taken for CGPA calculation.
- R.6.5 Students should have successfully completed the courses of (n minus 4)<sup>th</sup> semester to register for courses in nth semester. Eg. To register for courses in 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 10 semester of Dual Degree programme, the student should have successfully completed all the courses of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> semesters respectively, as prescribed in the curriculum of the concerned branch of study.
  - (i) Students who have backlog courses under n-4 rule, the registration of courses shall be restricted to the average credit clearance capacity in the last two semesters. The student must register the backlog courses first giving priority to the oldest backlogs. The students will register by default for backlog courses being offered in a particular semester.
  - (ii) The semester used by a student to clear only the backlog course(s), will not be treated as effective for reckoning the no. of semesters spent by the student with respect to maximum permissible limit (vide R 11.1)

# **R.7.0** Registration Requirement

R.7.1 The curriculum for any semester, shall not be required to registered for more than 60 credits. If a student finds his/her academic/course load heavy in any semester, or for any other valid reason, he/she may drop courses if the student maintains a minimum attendance grade G in that case till the date of application, within 45 instructional days from the commencement of the semester with the written approval of his/her Faculty Adviser & Head of the Department. However, the student should ensure that the total number of credits registered in any semester should enable him/her to earn the minimum number of credits as specified in **R.10.1**.

#### **R.8.0** Supplementary Examination

- R.8.1 Students who get "U" grade and attendance code "G" (Good) and above in a core course are eligible to seek Supplementary Examination.
- R.8.2 A student is eligible for only one Supplementary Examination in any course. No second chance is given. In case a student fails in the Supplementary Examination he/she has to repeat the course in a regular semester, as and when it is offered.
- R.8.3 The Supplementary Examination will be offered by the same teacher who offered the course earlier.
- R.8.4 The Supplementary Examination can be held during the makeup/supplementary week of the subsequent semester, at the convenience of the teacher concerned.
- R.8.5 For taking Supplementary Examinations, the students need not attend classes in that course once again. The same attendance code earned in the earlier examination will be retained for the Supplementary Examination.
- R.8.6 The end semester alone is given as a Supplementary Examination and the sessional marks already secured by a student in that course will be taken into account for finalizing the grade and the same cut-off for the grades shall be used.

#### **R.9.0** Contact Courses

R.9.1 A Contact course may be offered during the regular semester or during summer by a Department, **only** to a final year student who has obtained "U" grade in a CORE course.

The course will be offered **only** on the recommendation of the department, with the mutual agreement of the teacher and the student.

- R.9.2 No student should register for more than two contact courses during the semester or summer period.
- R.9.3 The contact course cannot be offered if the same subject is offered as a regular course during that period.
- R.9.4 Such final year students, who wish to take contact course(s), should apply to the Dean, Academic Courses before the commencement of the semester or summer as the case may be, in which the contact course is to be taken.
- R.9.5 The assessment procedure for a contact course will be similar to that of the regular semester course.
- R.9.6 Withdrawal from a contact course is not permitted.

#### **R.10.0** Minimum Requirement to Continue the Programme and Readmission

R.10.1 A student should earn not less than 30 credits in the first semester, and 74 credits at the end of the second semester.

Thereafter, he/she must maintain an average of 36 credits per semester, including the first two semesters, to continue his/ her studies.

However, in the final semester, a student may earn less than 36 credits if it is sufficient for him/ her to fulfill the requirements for the award of the degree.

If a student fails to earn credits every semester as stated above, he/she will be relieved from the programme.

- R.10.2 A student who has not completed the NCC / NSO / NSS requirements (see R.27) in the first four semesters will not be permitted to continue the Dual Degree programme.
- R.10.3 A student should have a minimum CGPA (see R. 26.2) of 5.0, calculated for the courses successfully completed at the end of each semester. If the CGPA so calculated is below 5.0 or if he/she earns less than required average credits, the student will be issued a warning under intimation to their parents.

When there is a reduction in GPA between two successive semesters, then the FA, HoD and the parent will be initimated.

In the following semester, if the CGPA is less than 5.0 or the student could not maintain required average credits, as per **R.10.1**, he/she will be relieved from the programme at the end of the semester.

### R 10.4 Readmission

The students who do not satisfy the minimum requirement vide R.10.1 and relieved from the programme may seek readmission to Dean, Academic courses with recommendation from Faculty Advisor and Head of the Department.

# **R.11.0** Maximum Duration of the Programme

R.11.1 A student is expected to complete the Dual Degree programme in ten semesters. However a student may complete the programme at a slower pace, but in any case not more than 14 semesters, excluding semesters withdrawn on medical grounds, etc. as per R.12.1. However the students have to satisfy R.10.1 every semester, failing which their registration will be cancelled.

# **R.12.0** Temporary Withdrawal from the Programme

R.12.1 A student may be permitted by the Dean of Academic Courses to withdraw from the programme for a semester or longer for reasons of ill health or other valid reasons. Normally, a student will be permitted to withdraw from the programme only for a maximum continuous period of two semesters.

# **R.13.0** Discipline

- R.13.1 Every student is required to observe discipline and decorous behaviour both inside and outside the campus and not to indulge in any activity which will tend to bring down the prestige of the Institute.
- R.13.2 Any act of indiscipline of a student reported to the Dean, Academic Courses, will be referred to a **Discipline and Welfare Committee constituted by the Senate.**

The Committee will enquire into the charges and recommend suitable punishment if the charges are substantiated. The Senate will consider the recommendation of the Discipline and Welfare Committee for appropriate action. The committee will report the action taken at the next meeting of the Senate.

- R.13.3 Appeal: The student may appeal to the Chairman, Senate, whose decision will be final
- R. 13.4 Ragging of any dimension is a criminal and non-bailable offence in our country. The current State and Central legislations provide for stringent punishment, including imprisonment. Once the involvement of a student is established in ragging, the offending student will be dismissed from the Institution and will not be admitted into any other Institution. Avenues also exist for collective punishment, if individuals can not be identified in this inhuman act. Every senior student of the Institute, along with the parent, shall give an undertaking every year in this regard and this should be submitted at the time of enrolment.

#### **R.14.0** Attendance

R.14.1 Every teaching staff member handling a class will take attendance till the last instructional day in the Semester. The percentage of attendance, calculated up to this point, will be indicated by a letter code as follows:

Attendance Rounded to	Remarks	Code
≥ 95%	Very Good	VG
85 to 94%	Good	G
< 85%	Poor	Р

R.14.2 A student who has an attendance lower than 85%, whatever may be the reason for the shortfall in attendance, will not be permitted to appear in the end-semester examination of the course in which the shortfall exists.

His/her registration for that course will be treated as cancelled, and he/she shall be awarded 'W' grade (W stands for registration cancelled for want of minimum attendance) in that subject. This grade shall appear in the grade card till the course is successfully completed.

In the case of a core course, the student should register for and repeat the course when it is offered next.

R.14.3 The teacher handling a course must finalise the attendance 3 calendar days before the last instructional day of the course in the semester.

The particulars of all students who have attendance less than 85% in that course must be announced in the class by the teacher himself/ herself. Copies of the same should be sent to the Dean, Academic Courses and Heads of Departments concerned. Students who get less than 85% should not be permitted to sit for the end-semester exam without the permission of the Dean Academic Courses.

- R.14.4 Condonation of Attendance: Every student is expected to put in 100% attendance. The minimum-attendance requirement is 85%. For cases of casual absenteeism, no condonation of attendance is permissible. If a student has less than 85% attendance, he/she should be assigned 'W' grade in that subject along with 'P' as the attendance code. The percentage of attendance for a student in a subject shall be computed as:
  - (a) For calculation of attendance in normal cases:

For cases of minor illnesses and casual absenteeism actual % of attendance is computed as:

Actual no. of classes attended x 100

Total no. of classes held till date of compilation of attendance

which should be  $\geq$  85%. Otherwise, W grade shall be awarded. Such cases will not come under the purview of condonation of attendance.

(b) For calculation of attendance in case of prolonged illness and/or hospitalization with medical certificate:

A student should have more than 40% attendance calculated as per (a) above to be eligible for condonation.

Notional % of attendance =

Actual no. of classes attended x 100

(Total no. of classes held in the semester) - (No. of classes held during the days of prolonged illness and or hospitalization)

which should be  $\ge 85\%$  for condonation

#### **R.15.0** Assessment Procedure – Tests and Examinations

R.15.1 The Senate will decide from time to time on the system of tests and examinations in each subject in each semester. The current practice is the following:
#### **R.16.0** System of Tests

- R.16.1 In lecture based courses, **two quiz tests** will be held in the case of common courses of first three semesters and for higher semester courses as decided by the Class Committee. The details of weightage of marks for these quizzes have to be announced to the students, in consultation with the Class Committee. The Dean of Academic Courses should be informed of the scheme of evaluation at the beginning of the semester.
- R.16.2 The adoption of mid-semester examination for the common courses of I to III semesters may be considered by the Heads of Departments concerned.

#### **R.17.0 End Semester Examination**

R.17.1 There will be one end-semester examination of three hours duration in each lecture based subject.

#### **R.18.0** Project Evaluation

- R.18.1 The project work of all Dual Degree students will commence nt later than 1<sup>st</sup> June following the 8<sup>th</sup> semester, regardless of whether te students are eligible for HTTA or not.
- R.18.2 At the completion of a project, the student will submit a project report which will be evaluated by duly appointed examiner(s). The evaluation will be based on the report and a viva-voce examination on the project.
- R.18.3 The project reports of Dual Degree students who have not completed their course work will be evaluated in that semester itself and the result sent, in confidential, to the Dean, Academic Courses. The result of the project work evaluation will be declared by the Dean, Academic Courses only after the successful completion of the course requirements.

#### **R.19.0** Weightages

R.19.1 The following will be the weightages for different subjects:

a)	For common courses of first three semesters: 2 Quizzes – 20 marks each End Semester Examination	40% 60%
b)	Laboratory based subjects: For Laboratory based subjects, an end semester examination may or may not be held Sessional Assessment Practical examination must be conducted for all the lab courses. End-semester examination, if held: Maximum weightage	75–100% 25%

#### For higher semester courses:

The weightage for theory courses of higher semesters of the Dual Degree programme should not be below 40% each for both sessional assessment and end semester examination. Subject to the above constraint, the Class Committee is free to decide the weightages in any course and announce to the students within 2 weeks from the beginning of the semester.

R.19.2 The markings for all tests, tutorial assignments (if any), laboratory work and examinations will be on an absolute basis. The final percentages of marks are calculated in each subject as per the weightages given in **R.19.1**.

#### **R.20.0** Make-up Examination

R.20.1 Students who have missed the quizzes or end-semester examination for valid reasons are eligible for a make-up examination.

A student who has missed quiz(zes) and the end semester examination in the same course due to genuine reasons like illness etc. may be permitted to write a make-up examination for the missed end-semester alone and awarded zero marks for the missed quiz(zes), provided the student satisfies the attendance requirements.

The students should make an application to the Dean, Academic Courses 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.

R.20.2 Official permission to take a make-up examination will be given under exceptional circumstances such as admission to a hospital due to illness.

Students residing in the Hostels should produce a Medical Certificate issued by the Chief Medical Officer of the Institute that he/she was admitted in 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 bythe parent / guardian.** 

#### R.20.3 A slot-wise make-up examination will be held during the makeup / supplementary week as per Academic Calendar of subsequent semester for those who are permitted to take the make-up examination.

The question paper will be common to all the students taking make-up examinations in a given subject. However, the question paper will be so structured that a student will be required to answer only parts of the paper carrying marks in proportion to the weightages of the tests / examinations missed by him / her.

R.20.4 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 Academic Courses or with approval of the Senate may permit the student to appear for a second make-up examination.

#### **R.21.0** Subject-wise Grading of Students

#### R.21.1 Letter Grades

Based on the semester performance each student is awarded a final letter grade at the end of the semester, in each subject. The letter grades and the corresponding grade points are as follows:

Grade	<b>Grade Points</b>	Remarks
S	10	
А	9	
В	8	
С	7	
D	6	
Е	4	
U	0	
Р	-	Pass
F	0	Fail
W	0	Failure due to insufficient attendance in course
Ţ	0	Incomplete (subsequently to be changed into pass (E to S) or U
		grade in the same semester).
Х	0	Completed NSO/NCC/NSS requirements
Y	0	Incomplete (in NSO/NCC/NSS)

R.21.2 A student is considered to have completed a subject successfully and earned the credits if he/she secures a letter grade other than U/ F or W or I in that subject. A letter grade U/F or W in any subject implies a failure in that subject.

#### **R.22.0** Method of Awarding Letter Grades

- R.22.1 A final meeting of the **class committee** without the student members will be convened within **seven days after the last day of the end semester examination**. The letter grades to be awarded to the students for different courses will be finalized at this meeting.
- R.22.2 The faculty member shall upload grade through workflow and the Chairman of Class Committee approve the grade within the senate prescribed deadline specified in the academic calendar.

#### **R.23.0** Declaration of Results

- R.23.1 After finalization by the Class Committee the letter-Grade awarded to the students will be uploaded through online by the teachers. After online approval by the Chairperson of the respective Class Committee, it will be available in academic website for the students to view their grades.
- R.23.2 The **W** grade once awarded stays in the record of the student and is deleted when he/she completes the subject successfully later. The grade acquired by him/her will be indicated in the grade card of the appropriate semester with an indication of number of attempts made in that course.
- R.23.3 'U' grade obtained by the students will be deleted in the grade card once that course is successfully completed. The grade acquired by the students will be indicated in the grade card of the appropriate semester indicating also the number of attempts made in that course.

#### **R.24.0** Re-examination of Answer Papers

R.24.1 In case any student feels aggrieved, he/she can contact the teacher concerned within three weeks from the commencement of the semester immediately following the announcement of the results.

The student shall have access to his/her answer paper(s) in the end semester examination which may be shown to him/her by the teachers concerned. If the teacher feels that the case is genuine, he/she may re-examine the case and upload a revised grade, if any, through workflow. After approval by HoD and Dean(Academic Courses) the revised grade will be reflected in the grade card.

#### **R.25.0** Course Repetition

R.25.1 A student who earns a U or W grade in a core course has to repeat it compulsorily when the course is offered next.

A student securing a U or W grade in an elective course, may repeat it if he/she so desires to get a successful grade.

R.25.2 A course successfully completed can not be repeated. In some cases where students have taken all core and elective courses but still fail to minimum CGPA of 5.0 and thus will not be eligible to get degree. In such cases the student be permitted to repeat the core or elective courses to earn the minimum CGPA.

Option can also be given to such students to select courses to be considered for calculating CGPA for eligibility for award of degree.

#### R.26.0 Grade Card

- R.26.1 The grade card issued at the end of the semester to each student will contain the following:
  - a) the course number, name of the course and the credits for each course registered in that semester.
  - b) the letter grade obtained in each course
  - c) the attendance code in each course
  - d) the total number of credits earned by the student upto the end of that semester in each of the course categories
  - e) the Cumulative Grade Point Average (CGPA) of all the courses taken from the first semester.

R.26.2 The GPA will be calculated according to the formula:

$$\mathsf{GPA} = \frac{\sum_i (\mathsf{C}_i \; \mathsf{x} \; \mathsf{GP})}{\sum_i \mathsf{C}_i}$$

Where  $C_i$  = credit for the course, GP = the grade point obtained for the course and  $\Sigma_i C_i$  = the sum of credits of all courses taken in that semester, including those in which the student has secured U and W grades.

For the cumulative grade point average (CGPA), a similar formula is used where the sum  $\Sigma_i C_i$  is the sum of credits of all courses taken in all the semesters completed up to the point in time.

The **CGPA based on the successfully completed courses** is calculated, deleting the 'U' or 'W' grades, and **is also shown separately in the grade card**.

R.26.3 No class or division or rank will be awarded to the students at the end of their B.Tech programme. However, for conversion of (i) CGPA into percentage and (ii) Percentage to CGPA for admission purpose as well as for issuing certificate to the alumni for their

professional carrier purpose, the Senate has approved the following conversion formula: Percentage = 55 + 10 (CGPA) – 6.

#### **R.27.0** NCC / NSO / NSS Requirements

- R.27.1 All students admitted to the Dual Degree programme will have to take either NCC or NSO or NSS as a non-credit extra-curricular programme. NCC programme is not available for Foreign nationals and women students.
- R.27.2 The NCC / NSO / NSS requirement should be completed within the first two semesters.
- R.27.3 Attendance requirement with as per clause R14.1.
- R.27.4 If a student falls short of the attendance requirements he / she should make up through extra session.
  - (i) If the absence is on valid grounds, the deficiency will be made up in the extra NCC / NSO / NSS programmes to be offered during May of the same year.
  - (ii) If the absence is unauthorized, the deficiency will have to be made up during the following year. The deficiency in NCC will have to be made up in NSO / NSS programmes at the rate of four times the deficiency, i.e., each NCC / NSS class missed will be made up by four NSO classes.

The deficiency in NSO / NSS classes will have to be made up at the rate of two classes for each class missed.

#### **R.28.0** Scholarships and Tuition Fee Exemption

R.28.1 25% of the students admitted or 25% of the sanctioned strength, whichever is less, will be awarded Merit-Cum-Means (MCM) scholarship up to 8 semesters of the programme similar to B.Tech students subject to the terms and conditions and at the rates approved by the Government of India from time to time.

These students are exempted from paying tuition fees.

In addition, 10% of the students admitted or 10% of the sanctioned strength, whichever is less, are exempted from payment of tuition fees for the 8-semester of the programme.

In the cases of scholarships provided by private organisations, the rates and terms and conditions for the award of such scholarship shall be as approved by the Senate.

In the case of the SC / ST candidates all are exempted from payment of tuition fees the award of scholarships and other benefits will be in accordance with the rules framed by the Government of India.

R.28.2 Such of those Dual Degree students who obtain a valid GATE score or secured CGPA of 8.0 or above and earned a minimum of 400 credits at the end of the 8<sup>th</sup> semester will be awarded HTTA for a period of 12 months as applicable to the regular M.Tech programme.

The Dean of Academic Courses will lay down the administrative procedures to be followed in the selection of the students for the award of the scholarship/HTTA consistent with existing Government regulations if any. The number and names of the selected candidates will be reported to the Senate.

#### R.28.3 Leave Rules:

These students are eligible for leave of 30 days in the fifth year starting from 1<sup>st</sup> July which will be regularized 15 days per semester with a provision to carry over from IX to X semester. The intervening holidays will be treated as part of leave with provision of suffixing and prefixing holidays.

All Dual Degree students who are awarded with HTTA should apply to the Head of the Department for leave stating the reasons whenever they are not in a position to attend classes/project work. They will not be eligible for HTTA for the period of absence, if it is unauthorized leave even if they have not fully utilized the eligible leave.

#### **R.29.0** Eligibility for Award of the B.Tech and M.Tech/BS & MS Dual Degree

- R.29.1 A student shall be declared to be eligible for award of the B.Tech and M.Tech/BS & MS dual degree if he/she has
  - a) registered and successfully completed all the core courses and projects;
  - b) successfully acquired the minimum required credits as specified in the curriculum corresponding to the branch of his/ her study within the stipulated time;
  - c) earned the specified credits in all the categories of subjects;
  - d) completed the NCC / NSO / NSS requirements;
  - e) secured a CGPA of 5.0 in passed subjects only.
  - f) no dues to the Institute, Hostels, Libraries, NCC / NSS / NSO etc.

and

g) no disciplinary action is pending against him / her.

The following procedure will be followed for credit transfer for students visiting Universities abroad under Exchange programme of NUS/DAAD or any other University, with effect from Jan-May 2008 semester.

The credits / grades indicated in the grade sheet obtained from the university in which the student has completed the courses should be used by the student as part of his/her transcripts.

IIT Madras transcripts will only indicate the courses, credits and grades completed at IITM and the total no. of credits (without grades) earned in other Universities in a particular semester.

The CGPA calculation based on credits earned/completed at IIT Madras alone is to be considered for award of prizes.

The credits earned at Universities abroad will be taken into account for calculation of minimum required credits for the award of the degree.

R.29.2 The award of the degree must be recommended by the Senate and approved by the Board of Governors of the Institute.

### R.30.0 Eligibility for Award of the Dual Degree [B.Tech(Honours)&M.Tech] Degree

R.30.1 In addition to the conditions prescribed under R.2.8, and the Dual Degree [B.Tech(Honours) & M.Tech ]/ Dual Degree [BS(Honours) & MS] students must maintain a CGPA of 8.5 from 4<sup>th</sup> semester. Otherwise, they will be awarded only Dual Degree (B.Tech & M.Tech) Degree.

- R.30.2 Extra credits earned by the students will be counted for prizes and awards.
- R.30.3 The award of Dual Degree [B.Tech(Honours) & M.Tech]/ Dual Degree [BS(Honours) & MS] must be recommended by the Senate and approved by the Board of Governors of the Institute.

#### **R.31.0** Power to Modify

R.31.1 Notwithstanding all that has been stated above, the Senate has the right to modify any of the above regulations from time to time.

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# **ORDINANCE AND REGULATIONS**

# M.TECH

# (Applicable from 2015 Batch)



## INDIAN INSTITUE OF TECHNOLOGY MADRAS

CHENNAI- 600 036

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#### M.Tech (Master of Technology)

(Applicable for 2015)

#### ORDINANCES

O.1 Candidates who have qualified for the award of the Bachelor's degree in Engineering / Technology or Master's degree in Science and who have qualified in *GATE (Graduate Aptitude Test in Engineering)* are eligible to apply for admission to the M.Tech programme. B.Tech Graduates from IITs with a minimum CGPA of 8 for GE, and 7.5 in case of SC/STs, are eligible for admission without GATE Score.

Candidates who have qualified for the award of the Bachelor's degree in Engineering / Technology or Master's degree in Science through distance education/ correspondence mode and who have qualified in *GATE (Graduate Aptitude Test in Engineering)* are also eligible to apply for admission to the M.Tech programme.

- O.2 In addition to 0.1, a candidate who possesses **Associate Membership of Professional Bodies** approved by the Senate who has qualified in **GATE** shall also be eligible to apply for admission to the M.Tech programme, subject to regulations approved by the Senate.
- O.3 Notwithstanding what has been stated in 0.1 above, applications from *candidates sponsored* by organisations recognised by the Senate, and applications from *foreign nationals* received through proper channel, may be considered for admission to the M.Tech programme *without a GATE qualification.* Their admission shall, however, be governed by the regulations prescribed by the Senate.
- O.4 Candidates from Government / Public Sector Organizations with Associate Membership qualification (AMIE, AESI, AMIM, AMIIChemE, AMIETE as listed in M.Tech Admission Brochure) and having two years of experience, can be permitted to apply for admission to M.Tech under sponsored programme without GATE score.
- O.5 The exact eligibility criteria for admission to the M.Tech programme shall be as approved by the Senate of the Institute from time to time and announced by the Institute in the "M.Tech Admission Brochure" for admission, each year.
- O.6 The normal duration of the M.Tech programme, including project work, shall be *four semesters.* Candidates may be permitted to do their project work in the industry and other approved organisations as prescribed in the regulations.
- O.7 The award of *Half-time Teaching Assistantship (HTTA)* to the candidates admitted to the M.Tech programme shall be in accordance with the regulations of the Senate of the Institute.
- O.8 The award of the M.Tech degree shall be in accordance with the regulations of the Senate of the Institute.

### REGULATIONS

#### R.1.0 Admission to the M.Tech Programme

- R.1.1 Candidates who have qualified in *GATE* (Graduate Aptitude Test in Engineering) are eligible to apply for the M.Tech programme as full time students on Institute HTTA.
- R.1.2 Candidates **sponsored under Quality improvement Programme** or other similar programmes are also eligible to apply.
- R.1.3 Candidates *sponsored by the Industries,* established Institutes/R&D Organisations/National laboratories are also eligible to apply.
- R.1.4 *Foreign nationals* who got degree from India Bachelor's degree in Engineering / Technology / Architecture or equivalent or a Master's degree in Mathematics / Chemistry / Physics / Life Sciences / Related Subjects and a valid GATE score are eligible to apply.

*Foreign nationals* whose applications are received through *Indian Council of Cultural Relations,* Government of India are also eligible to apply.

*Foreign Nationals* are also eligible under the self-financing scheme, for which applications are invited through their embassies.

Supernumerary seats: The number of such supernumerary seats will be decided by the departments that can be accommodated in the in new proposal.

# GRE/GMAT Score with TOEFL, academic record and letters of reference will be considered as additional requirement for Foreign nationals.

- R.1.5 Announcements for M.Tech Admission will be made by the Institute and the candidates under categories R.1.1, R.1.2 and R.1.3 mentioned above should apply online before the specified dates.
- R.1.6 The eligibility criteria for admission including the GATE qualification required for admission as full-time students with HTTA, or as sponsored or other candidates, mentioned under R.1.1, R1.2 and R.1.3 will be decided by the Senate.
- R.1.7 The Senate of the Institute will decide on the number of seats for various specialisations/ Departments/ Centres. Seats are reserved for SC, ST, OBC and persons with disabilities (PWD) as per the Government of India rules. However, to be considered for admission, they should have qualified in GATE and should satisfy other Senate requirements.
- R.1.8 The M.Tech Admissions Committee constituted by the Chairman, Senate, will decide on the operational aspects of selection of candidates based on the criteria laid down by the Senate.

However, in the case of service officers under the control of Army / Navy / Airforce / DRDO, the selection will be through a central selection committee(s) with the Institute faculty serving on the selection committee.

- R.1.9 Vacancies, if required to be filled up after the admission date, will be decided by the Chairman, Senate, and reported to the Senate for post-facto approval.
- R.1.10 In all matters concerning the selection of candidates, the decision of the Chairman, Senate, or his / her nominee, viz. Chairman, M.Tech Admissions Committee, is final.
- R1.11 In addition to satisfying the conditions given in the information Brochure for M.Tech Admission sent along with the application forms, the selected candidates should satisfy the other admission requirements indicated in the offer letter of admission. Only then, they will be

admitted to the M.Tech programme, after payment of the prescribed fees. However, if at any time, if any of the requirements are not fulfilled by the candidate, then his/her admission to the programme may be cancelled.

#### R.2.0 Structure of the M.Tech programme

- R.2.1 The programme of instruction for each stream of specialisation will consist of
  - *i. core courses* to be compulsorily taken by all the students of the programme.
  - *ii. elective courses* including domain specialization courses offered (Electives will have to be opted from the courses offered by the Department in the particular quarter from amongst the list of approved courses)
  - *iii.* Laboratory courses
  - *iv.* project work

The student may be required to give one or more seminars and undergo industrial / practical training during the programme.

- R.2.2 The complete programme will be of *4 semesters duration*. The academic programmes in each semester may consist of course work and/or project work as specified by the Senate for each specialisation.
- R.2.3 Every stream of specialisation in the programme will have a curriculum and syllabi for the courses approved by the Senate. The curriculum should be so drawn up that the minimum number of credits for successful completion of the M.Tech programme of any stream is  $200 \pm 10$  credits.
- R.2.4 A student will have to register in all the *core courses* listed in the curriculum of his/her stream of specialisation and successfully complete all of them.

However, the Departmental Consultative Committee may grant permission to a student not to register for some of the core courses and substitute them with some other courses, depending on the courses successfully completed by the student in the undergraduate programme.

This has to be intimated to and approved by the Dean of Academic Courses.

R.2.5 Electives will have to be taken from the courses offered by the Department in that particular semester from among the list of approved courses.

However, departments may permit the selection of electives other than those listed against the stream, provided they have relevance to the area of specialisation and subject to the approval of the Faculty Adviser.

- R.2.6 Students may be permitted to register for a maximum of two B.Tech courses. The concerned departments will identify such courses and get prior approval of the Senate.
- R.2.7 The medium of instruction, examination, seminar and project reports will be in English.

#### R.2.8 Definition of new credits system

- (i) One credit indicates an effort of 50 minutes (1 *credit-hour*) per working week.
- (ii) One *credit-hour* of lecture is assumed to need two *credit-hours* (1 hour 40 minutes) outside the class room in terms of student effort to thoroughly comprehend the subject material, do the home works etc. Thus, a course with 3 lectures a week will be a 3+(3\_2) = 9 credit course, indicating that a student needs to put in 9 *credit-hours* (7 hours 30minutes) of work a week on this course, inside and outside the classroom put together.

- (iii) A one *credit-hour* supervised session with no effort required outside should count for one credit. Thus, an afternoon (2 hours 30 minutes) laboratory session, where the student runs an experiment, collects data, interprets it and writes a report should be awarded 3 credits. If a laboratory course requires effort outside of the allotted 2.5 hour slot, appropriate credit should be awarded (1 credit for 1 *credit-hour*, *i.e.*, 50 minutes). In the same vein, a 1 *credit-hour* tutorial session should be awarded 1 credit, if no work is expected outside.
- (iv) In any given semester, a student should not be required to register for more than 60credits. This means a maximum academic time commitment of about 50 clock hours every week.

In line with the above credit definition, sample credit mapping for typical courses/laboratory structure is summarized below:

	Credit hours per week for					
Nature of Course	Lecture	Tutorial	Extended Tutorial	Afternoon Lab Session	Time to be spent outside of class	Total credits in new system
		(b)	©	(d)	(e)	a+b+c+d+e
Theory	3	0	0	0	3 x 2 = 6	9
Theory + Tutorial <sup>\$</sup>	3	1	0	0	3 x 2 = 6	10
Theory + Tutorial <sup>\$</sup>	3	1	1	0	3 x 2 = 6	11
Theory + Lab	2	0	0	3	2 x 2 = 4	9
Laboratory	0	0	0	3	0	3
Laboratory	0	0	0	3	2	5
Project	0	0	0	0	27	27

<sup>\$</sup> Assuming tutorial does not require any work outside

Each time unit specified in the table = 50 minutes

#### R.3.0 Faculty Adviser

R.3.1 To help the students in planning their courses of study and for getting general advice on the academic programme, the concerned Department will assign a certain number of students to a Faculty Member, who will be designated as *Faculty Adviser*.

#### R.4.0 Class Committee

- R.4.1 For I and II semesters of M.Tech Programme, branchwise class committees will be constituted by the Heads of the Departments comprising of:
  - i. Course teacher / co-ordinators of all subjects (not covered under R.4.2)
  - ii. One Professor, preferably not offering courses for the class, as chairman
  - iii. Four student members, or 20% of the class strength, whichever is less
  - iv. Faculty Adviser Ex-Officio Member
- R.4.2 A common class committee for Mathematics and Humanities and Social Sciences (HSS) courses of I and II semesters of M.Tech Programme will also be formed for the courses open to all M.Tech streams. These committees will be constituted by the Heads of Mathematics/HSS departments comprising of:

- i. Course teachers of all subjects
- ii. One Professor, preferably not offering courses for the class, as Chairman and
- iii. Four student members.
- R.4.3 The basic responsibilities of the class committee are :
  - a) to review periodically the progress of the courses, to discuss issues concerning curricula and syllabi and the conduct of the classes.
  - b) The type of assessment for the course will be decided by the teacher in consultation with the class committee, and will be announced to the students at the beginning of the semester in accordance with R 19.0.
  - c) Each class committee will communicate its recommendations to the Head of the Department and the Dean of Academic courses.
  - d) The class committee, without the student members, will also be responsible for the finalisation of the semester results.
- R.4.4 The class committee is required to meet at least twice in a semester, once at the beginning of the semester and another time after the end-semester examination, to finalise the grades.

#### R.5.0 Upgradation to (M.Tech+Ph.D) programme

M.Tech students will be eligible for upgradation to (M.Tech+Ph.D.) if they satisfy the following criteria:

- a. The candidate should have successfully completed a minimum of 2 semesters in the M.Tech. Programme.
- b. The candidate should have a minimum CGPA of 8.0 in the prescribed courses.

A Committee duly constituted by the Head of the Department will consider such applications for upgradation to Ph.D. and make its recommendation to the Chairman, as per the rules.

For detailed requirement for award of M.Tech+Ph.D degree refer to Ph.D Ordinance

#### **R.6.0** Registration and Enrolment

#### R.6.1 Enrolment:

From the second semester onwards, *all students have to enroll on the first day at the beginning of a semester*. A student will become eligible for enrolment only if he/she satisfied R.10.1 and in addition he/she has cleared all dues to the Institute, Hostel and the Library upto the end of the previous semester, provided he/she is not debarred from enrolment by the Institute, on disciplinary grounds.

The list of students who don't enroll for the current semester will be forwarded to the CCW office for further action.

#### R.7.0 Registration

R.7.1 Except for the first semester, online registration of courses for the ensuing semester will be done during a specified week before the end-semester examination of the previous semester.

Those students who register beyond the last date prescribed for registration, a late registration fee as prescribed by the senate will be charged upto the last date as per academic calendar of respective semester and the students should seek readmission into the hostel. Beyond this period, concerned students will not be permitted to enroll for the following

semester and their registration status will be declared as "withdrawn". The list of such students will be sent to Dean (Students) for further necessary action regarding hostel accommodation.

R.7.2 The registration done by students will be shown online for Faculty Advisor's approval.

If a student finds his/her academic/course load heavy in any semester, or for any other valid reason, he/she may drop courses before the last date mentioned in the Academic Calendar with the approval of course Teacher and his/her Faculty Adviser. Request for dropping courses can be approved up to 45 working days from the commencement of the class provided the student maintains a minimum attendance grade of G (Good-85% to 94%) till the time of dropping (i.e. date of getting the approval of course faculty). In specific courses, the teacher can reduce this period to less than 45 days by prior intimation to the class.

- R.7.3 The **M.Tech students are eligible to take extra courses apart from the courses prescribed** in the curriculum viz. one course in the 3<sup>rd</sup> semester and not more than two courses in the 4<sup>th</sup> semester, subject to a maximum of 27 credits, provided a student has no backlog and has earned a minimum CGPA of 7.0 at the end of the previous semester. Students taking extra courses **should obtain the prior approval of the Dean (Academic Courses)**. This will be shown in the grade card as EXT category and will be considered for CGPA calculation.
- R.7.4 During the final project semester, students are not normally permitted to register for courses.

However, students who are short of a few credits required for the degree may be allowed by the Dean of academic Courses to register for one or two courses along with the project under the specific recommendation from the Head of the department. In such cases the project duration may have to be extended accordingly beyond the normal period.

However, the M.Tech students are eligible for HTTA till the date of viva voce at the end of the fourth semester and not for the extended period of project or 24 months, whichever is earlier, as per the existing Government of Indian rules.

R.7.5 The number of courses for which they have registered should enable the student to earn the credits required to continue the studies as per R.10.

Course(s) withdrawn will have to be taken as and when they are offered, if they belong to the list of core courses (Compulsory courses).

R.7.6 In extraordinary circumstances like medical grounds, a student may be permitted by the Dean of Academic Courses to withdraw from a semester completely. *Normally, a student will be permitted to withdraw from the programme only for a maximum continuous period of two semesters.* 

#### **R.8.0** Supplementary Examination

- R.8.1 Students who get "U" grade and attendance code "G" (Good) and above in a core course are eligible to seek Supplementary Examination.
- R.8.2 A student is eligible for only one Supplementary Examination in any course. No second chance is given. In case a student fails in the Supplementary Examination he/she has to repeat the course in a regular semester, as and when it is offered.
- R.8.3 The Supplementary Examination will be offered by the same teacher who offered the course earlier.
- R.8.4 The Supplementary Examination will be held during the supplementary exam week as per the next semester Academic Calendar.

- R.8.5 Those students who have failed as per R.8.1 alone in the previous semester alone are eligible for taking supplementary as per R.8.4.
- R.8.6 For taking Supplementary Examinations, the students need not attend classes in that course once again. The same attendance code earned in the earlier examination will be retained for the Supplementary Examination.
- R.8.7 The end semester alone is given as a Supplementary Examination and the sessional marks already secured by a student in that course will be taken into account for finalizing the grade and the same cut-off for the grades shall be used.

#### R.9.0 Contact Courses

- R.9.1 A Contact course will be offered during the regular semester or summer by a Department only
  - i. to final year students who have obtained a "**U**" grade in a core course.
  - ii. when a teacher who is willing to offer this course is identified by the Department

# R.9.2 No student should register for more than two contact courses during the semester or in summer.

- R.9.3 The contact course will not be offered if a regular course is offered on the same subject during that period.
- R.9.4 Such final year students who are desirous of registering for a contact course, should make a request, in the prescribed form, to the Dean, Academic Courses through the Faculty advisor & HoD well before the commencement of the semester in which the contact course is to be taken.
- R.9.5 The assessment procedure for a contact course will be similar to that of the regular semester course.

#### R.9.6 Withdrawal from a contact course is not permitted.

#### R.10.0 Minimum Requirement to Continue the Programme and Readmission

R.10.1 A student should have earned not less than 30 successful credits in the first semester, 80 successful credits at the end of the second semester and 110 successful credits at the end of the third semester.

If a student fails to earn the required minimum credits at any particular semester, he/she will be relieved from the programme at the end of the semester.

R.10.2 In addition to the above, to be eligible to continue in the programme the student **should have a minimum CGPA of 5.0**, calculated according to the formula in R.26.2. However, in calculating the CGPA for eligibility to continue the programme only courses that the student has successfully completed, up to the point under consideration, will be taken into account. If the CGPA of any student so calculated falls below 5.0, the student will be issued a warning and if he/she does not make good and continues to get a CGPA less than 5.0 in the following semester also then he/she will be relieved from the programme.

#### R.10.3 Readmission

The students who do not satisfy the minimum requirement vide R.10.1 and relieved from the programme may seek readmission to Dean, Academic courses with recommendation from Faculty Advisor and Head of the Department.

#### **R.11.0 Maximum Duration of the Programme**

R.11.1 A student is ordinarily expected to complete the M.Tech programme in *four semesters*.

In case students do not complete their project work in four semesters, they are permitted to submit the report in the fifth semester with the prior approval of project guide, HoD and Dean, Academic Courses.

Under no circumstances students should be permitted to spend more than **5** semesters to complete the course work and **8** semesters for the total programme, including the project work, from the date of admission to the programme.

#### R.12.0 Discontinuation from the Programme

R.12.1 Students may be permitted to discontinue the programme and take up a job, *provided they have completed all the course work.* The project work can be done during a later period either in the organisation where they work, if it has R and D facility, or in the Institute. *Such students should complete the project within eight semesters from the date of admission to the programme.* 

Students desirous of discontinuing their programme at any stage with the intention of completing the project work at a later date should seek and obtain prior permission of the Dean of Academic Courses through the Faculty Advisor & HoD.

#### R.13.0 Discipline

- R.13.1 Every student is required to observe discipline and decorous behaviour both inside and outside the campus and should not indulge in any activity which will tend to bring down the prestige of the Institute.
- R.13.2 Any act of indiscipline of a student reported to the Dean, Academic courses, will be referred to the *Discipline and Welfare Committee* constituted by the Senate from time to time.

The Committee will enquire into the charges and recommend suitable punishment if the charges are substantiated. The Senate will consider the recommendation of the Discipline and Welfare Committee for appropriate action. The committee will report the action taken at the next meeting of the Senate.

- R.13.3 Appeal: The student may appeal to the Chairman, Senate, whose decision will be final.
- .R.13.4 Ragging in any dimension is a criminal and non-bailable offence in our country. The current State and Central legislations provide for stringent punishment including imprisonment. Once the involvement of a student is established in ragging, the offending student will be dismissed from the Institution and will not be admitted into any other Institution. Avenues also exist for collective punishment, if individuals can not be identified in this inhuman act. Every senior student of the Institute, along with the parent, shall give an undertaking every year in this regard and this should be submitted at the time of enrolment.

#### R.13.5 Grievance Resolution Committee

Each department has a Grievance Resolution committee consisting of 3 faculty members who may be approached by the students of the concerned departments for addressing their complaints.

An institute-level Grievance Resolution committee is constituted by Dean (Academic Courses).

#### R.14.0 Attendance

R.14.1 Every teaching staff member handling a class will take attendance till the last instructional day in the Semester. The percentage of attendance, calculated up to this point, will be indicated by a letter code as follows:

Attendance Rounded to	Remarks	Code
≥ 95%	Very Good	VG
85 to 94%	Good	G
<85%	Poor	Р

R.14.2 A student who has an attendance lower than 85%, whatever may be the reason for the shortfall in attendance, will not be permitted to appear in the end-semester examination of the course in which the shortfall exists.

His/her registration for that course will be treated as cancelled, and he/she shall be awarded 'W' grade (Failure due to insufficient attendance in course). This grade shall appear in the grade card till the course is successfully completed.

Students securing W grades in two or more theory courses in a semester will be placed under parental care. After maintaining regular attendance, a student can request Dean (Students) for hostel accommodation.

R.14.3 The teacher handling a course **must finalise the attendance on** 

#### the prescribed date as per the academic calendar.

The particulars of all students who have attendance less than 85% in that course must be announced in the class by the teacher himself/ herself. Copies of the same should be sent to the Dean, Academic Courses and Heads of Departments concerned. Students who maintain less than 85% should not be permitted to sit for the end-semester exam without the permission of the Dean Academic Courses.

R.14.4 Condonation of Attendance: Every student is expected to maintain 100% attendance. The minimum-attendance requirement is 85% (i.e to take care of short duration of ailment, attending family function / ceremony, participation in competition / events Senate permits a student to avail 15% leave with prior permission of class teacher).

For cases of casual absenteeism, no condonation of attendance is permissible. If a student has less than 85% attendance, he/she should be assigned 'W' grade in that subject along with 'P' as the attendance code. The percentage of attendance in a subject shall be computed as:

(a) For calculation of attendance in normal cases:

For cases of minor illnesses and casual absenteenism actual % of attendance is computed as:

Actual no. of classes attended x 100

Total no. of classes held till date of compilation of attendance

which should be  $\ge$  85%. Otherwise, W grade shall be awarded. Such cases will not come under the purview of condonation of attendance.

a) For calculation of attendance in case of prolonged illness and/or hospitalization with medical certificate:

A student should have more than 40% attendance calculated as per (a) above to be eligible for condonation.

Actual no. of classes attended x 100

(Total no. of classes held in the semester) - (No. of classes held during the days of prolonged illness and or hospitalization)

which should be  $\ge 85\%$  for condonation.

#### R.15.0 Leave Rules

- R.15.1 All M.Tech students should apply to the Head of the Department for leave stating the reasons whenever they are not in a position to attend classes/project work. They will not be eligible for HTTA for the period of absence, if it is unauthorised leave even if they have not fully utilised the eligible leave.
- R.15.2 Students are eligible for leave of 30 days in a year which will be regularised as 15 days per semester with a provision of carry over from first to second semester and from the third to fourth semester. The unutilized leave from the first year cannot be carried over to the second year. Since the project work has to be commencement on 1<sup>st</sup> June following the second semester leave can not be availed in that month.

The intervening holidays will be treated as part of leave with provision of suffixing and prefixing holidays.

#### **R.16.0 Assessment Procedure : Tests and Examinations**

R.16.1 For Lecture / Lecture and Tutorial based subject to a minimum of two sessional assessments will be made during the semester. The sessional assessment may be in the form of periodical tests, assignments or a combination of both, whichever suits the course best. The assessment details as decided at the Class Committee will be announced in the class by the teacher right at the beginning of the semester.

#### R.17.0 End Semester Examination

R.17.1 There will be one end semester examination of 3 hours duration in each lecture based subject.

#### **R.18.0** Project Evaluation

- R.18.1 The project work of all M.Tech students will commence not later than 1<sup>st</sup> June following the 2<sup>nd</sup> semester, regardless of whether the students are eligible for HTTA or not.
- R.18.2 The methodology followed by each department for project assignment will be enunciated and brought to the notice of the students well before registration at the time of assignment of project Title/Guide. Project registration through workflow will include Name of the Project title/Guide and broad area of work.

The project deliverables must be clearly enunciated by the faculty for the benefit of the students at the time of offering, commensurate with the levels of a PG project.

R.18.3 Binary Assessment of whether student is expected to complete as per schedule or not has to be submitted through the workflow by the committee / Guide by 1<sup>st</sup> March.

The grades of students who complete the project as per schedule shall be submitted through workflow 7<sup>th</sup> June.

1<sup>st</sup> May is the last date for recommending extension up to 30<sup>th</sup> June by committee/Guide. The grades of these students shall be submitted through workflow by 7<sup>th</sup> July.

If the project could not be submitted by 30<sup>th</sup> June, such students are required to get extension for the next semester.

- R.18.4 At the completion of a project, students will submit a project report which will be evaluated by duly appointed examiner(s). The evaluation will be based on the report and a viva-voce examination on the project.
- R.18.5 The project reports of M.Tech students who have not completed their course work will be evaluated in that semester itself and the result sent to the Dean, Academic Courses. The result of the project work evaluation will be declared by the Dean, Academic Courses only after the successful completion of the course requirements.
- R.18.6 Wherever the progress made by the student is not commensurate with the credits assigned, the Departmental Project review committee will (i) recommend extension of project till satisfactory performance and (ii) send intimation to Dean (Academic Courses) for informing the parents of such students.

#### R.19.0 Weightage

R.19.1 The following will be the weightages for different courses:

a)	Lecture or lecture and tutorial based courses: :	
	Sessional assessment:	Minimum of 40%
	End Semester examination:	Minimum of 40%
b)	Laboratory based courses:	
	Sessional Assessment:	
	Practical examination must be conducted for	75–100%
	all the lab courses. For End-semester	25%
	examination, if held: Maximum weightage:	

R.19.2 The markings for all tests, tutorial assignments (if any), laboratory work and examinations will be first made on an absolute basis.

The final percentages of marks are calculated in each subject as per the weightages given in R.19.1.

#### R.20.0 Make-up Examination

- R.20.1 Students **who have missed sessional assessments for valid reasons** should apply to the concerned teacher indicating the reasons for the absence and the teacher shall consider these requests suitably.
- R.20.2 Students **who have missed the end-semester examinations for valid reasons,** should make an application to the Dean of Academic Courses within ten days from the date of the examination missed. Permission to appear for a make-up examination in the course(s) is given under exceptional circumstances (like hospitalization, etc.)

# A student who misses this make-up examination will not be normally given another make-up examination.

However, in exceptional cases of illness resulting in the students missing a make-up examination, the Dean of Academic Courses, in consultation with the Chairman of the Senate, may permit the student to appear for a second make-up examination.

R.20.3 *For application on medical grounds,* students residing in the hostels should produce a Medical Certificate issued by an Institute Medical Officer only.

Students staying outside the campus permanently/temporarily should produce a medical certificate from registered medical practitioners and the same should be forwarded by the parents/guardians for the purpose of make-up examinations.

The Dean of Academic Courses can use his/her discretion in giving permission to a student to take a make-up examination, recording the reasons for his/her decision.

R.20.4 A slot-wise make-up examination will be held during the makeup/supplementary week as per next semesters Academic calendar for those who are permitted to take the make-up examination.

The question paper will be common to all the students taking makeup examinations in a given subject.

However, the question paper will be so structured that a student will be required to answer only parts of the paper carrying marks in proportion to the weightages of the tests/examinations missed by him/her.

#### R.21.0 Subjectwise Grading of Students into Categories

#### R.21.1 Letter Grades

Based on the performance, each student is awarded a final letter grade at the end of the semester for each of the registered courses. The letter grades and the corresponding grade points are as follows.

Grade	Grade points	Remarks
S	10	
Α	9	
В	8	
С	7	
D	6	
E	4	
U	0	
Р	-	Pass
F	0	Fail
W	0	Failure due to insufficient attendance in course
I	0	Incomplete (Subsequently to be changed into pass (E to S) or U grade in the same semester).
R		Registered.

- R.21.2 **Pass/Fail Course:** If an elective is registered as Pass/Fail (P/F) course than the teacher will upload the marks scored by the student and based on the cut off marks P grade will be assigned if it is above U grade cut off and F grade will be assigned if the mark is less than or equal to the U grade cut off. The credit earned by the P/F course will not be considered for CGPA/GPA calculation.
- R.21.3 A student is considered to have completed a subject successfully and earned the credits if he/she secures a letter grade other than U/ F or W or I in that subject. A letter grade U/F or W in any subject implies a failure in that subject.

Faculty will send marks scored and the attendance grade (VG, G and not "W") of the student who is given an "I" grade after the class committee along with the grades of other students as approved by the class committee.

It is the responsibility of the student to get an "I" grade resolved on or before the date specified in the Academic calander. For such students the faculty members will communicate the revised grade, to the academic section.

If the student does not get the "I" grade resolved within, the specified date, "I" grades will be replaced with a valid grade based on the marks scored at this point of time and relative grading cut-off for various grades his/her batch, along with an attendance "G or VG" as secured.

#### R. 22.0 Method of Awarding Grades

- R.22.1 A final meeting of the **class committee** without the student members will be convened within **seven days after the last day of the end semester examination**. The letter grades to be awarded to the students for different courses will be finalized at this meeting.
- R.22.2 The faculty member shall upload grade through workflow and the Chairman of Class Committee approve the grade within the senate prescribed deadline specified in the academic calendar.

#### **R.23.0** Declaration of Results

- R.23.1 After finalization by the Class Committee the letter-Grade awarded to the students will be uploaded through online by the teachers. After online approval by the Chairperson of the respective Class Committee, it will be available in academic website for the students to view their grades.
- R.23.2 The **W** grade once awarded stays in the record of the student and is deleted when he/she completes the subject successfully later. The grade acquired by him/her will be indicated in the grade card of the appropriate semester with an indication of number of attempts made in that course.
- R.23.3 **'U'** grade obtained by the students will be deleted in the grade card once that course is successfully completed. The grade acquired by the students will be indicated in the grade card of the appropriate semester indicating also the number of attempts made in that course.

#### **R.24.0** Re-examination of Answer Papers

R.24.1 In case any student feels aggrieved, he/she can contact the teacher concerned within three weeks from the commencement of the semester immediately following the announcement of the results.

The student shall have access to his/her answer paper(s) in the end semester examination which may be shown to him/her by the teachers concerned. If the teacher feels that the case is genuine, he/she may re-examine the case and upload a revised grade, if any, through workflow. After approval by HoD and Dean(Academic Courses) the revised grade will be reflected in the grade card.

#### R.25.0 Course Repetition

- R.25.1 A student who earns a 'U' grade in any "core course" has to repeat it compulsorily when offered next.
- R.25.2 A student who earns a "U" grade in an elective course has an option to repeat it in order to get a successful grade or substitute with any other elective, with the permission of the Faculty Adviser.

R.25.3 A course successfully completed can not be repeated. In some cases where students have taken all core and elective courses but still fail to minimum CGPA of 5.0 and thus will not be eligible to get degree. In such cases the student be permitted to repeat the core or elective courses to earn the minimum CGPA.

Option can also be given to such students to select courses to be considered for calculating CGPA for eligibility for award of degree.

#### R.26.0 Grade Card

- R.26.1 The grade card issued to students at the end of each semester will contain the following:
  - a. Course no, name of the course and the credits for each course registered in the semester.
  - b. the performance in each subject by the letter grade obtained vide R.21.1.
  - c. the attendance code secured in each course vide R.14.1.
  - d. the total number of credits earned up to the end of that semester.
  - e. GPA for each semester
  - f. the Cumulative Grade Point Average (CGPA) of all the courses taken form the first semester will be shown in the final semester grade card.
- R.26.2 The Grade Point Average (GPA) will be calculated by the formula.

$$\mathsf{GPA} = \frac{\sum_{i} (\mathsf{C}_{i} \times \mathsf{GP})}{\sum_{i} \mathsf{C}_{i}}$$

Where  $C_i$  = credit for the course, GP = the grade point obtained for the course and  $\Sigma_i C_i$  = the sum of credits of all courses taken in that semester, including those in which the student has secured U or W grades.

For the cumulative Grade Point Average (CGPA), a similar formula is used except that the  $\Sigma_i C_i$  is the sum of credits of all courses taken in all the semesters completed upto the point in time, including those in which the student has secured U or W grades.

R.26.3 No class/division/rank will be awarded to the students at the end of the M.Tech programme. However, for conversion of (i) CGPA into percentage and (ii) Percentage to CGPA for admission purpose as well as for issuing certificate to the alumni for their professional carrier purpose, the Senate has approved the following conversion formula: Percentage = 55 + 10 (CGPA) - 6.

#### R.27.0 Project work in Industry or other Organisations

- R.27.1 Sponsored candidates from organisations which have R and D units and facilities for research work and those students who get employment in such organisations after completion of the course work may be permitted to carry out their project work in such organisations during the final year, under the following conditions:
- R.27.2 A departmental committee shall examine the requests from such students, and fix in advance
  - i. an internal guide (a faculty member of the institute)
  - ii. area of project work, and
  - iii. the name and designation of an external guide (Scientist or Engineer in Industry).
- R.27.3 The above details should be submitted to the Dean of Academic Courses through the Head of the Department and the Dean's approval should be obtained before the commencement of the project.
- R.27.4 The students who are permitted to do the project work in an industry as per R.27 will have to pay the tuition and other fees to the Institute for the third and fourth semester as well.

#### R.28.0 Half-Time Teaching Assistantship

- R.28.1 Students who are eligible for M.Tech admission and who have qualified in GATE and are admitted as full time students of the Institute, will be eligible for the award of the HTTA notified by the Institute from time to time. HTTA students are not entitled to avail any other scholarship.
- R.28.2 Students specifically admitted under Non-HTTA category will not be eligible for HTTA. However, these candidates may apply for conversion, and eligible students will be converted to HTTA from the second semester, subject to the number of vacancies and based on their first semester performance.
- R.28.3 Students joining the M.Tech programme under sponsorship scheme with full salary will not be granted any HTTA even if they are qualified in GATE.
- R.28.4 Foreign nationals are not eligible for HTTA.
- R.28.5 B.Tech students from IITs who get admitted to M.Tech with 8.0 CGPA are also eligible for HTTA.

#### **R.29.0** Eligibility for the award of M.Tech Degree

- R.29.1 A student shall be declared to be eligible for the award of M.Tech degree if he/she has
  - a. registered and successfully completed all the core courses and the project.
  - b. successfully acquired the minimum number of credits vide R 2.3 prescribed in the curriculum of the given stream within the stipulated time vide R.11.0
  - c. no dues to the Institute, Library and Hostels and
  - d. no disciplinary action pending against him/her.
    - secured a CGPA of 5.0, considering only the successfully completed courses.

#### R.29.2 Credit Transfer

The following procedure will be followed for credit transfer:

For students visiting Universities abroad under Exchange programme of NUS/DAAD or any other University.

The credits / grades indicated in the grade sheet obtained from the university in which the student has completed the courses should be used by the student as part of his/her transcripts.

IIT Madras transcripts will only indicate the courses, credits and grades completed at IITM and the total no. of credits (without grades) earned in other Universities in a particular semester.

The CGPA calculation based on credits earned/completed at IIT Madras alone is to be considered for award of prizes. However, students who have studied one semester in other universities under student Exchange programme are not to be considered for annual prizes of the corresponding year.

The credits earned at Universities abroad will be taken into account for calculation of minimum required credits for the award of the degree.

R.29.3 The final award of the Degree must be recommended by the Senate and approved by the Board of Governors of the Institute.

#### R.30.0 Power to Modify

Notwithstanding all that has been stated above the Senate has the right to modify any of the regulations from time to time.

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# **MS Ordinances and Regulations**

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## Revised upto the 306th Meeting of the Senate



Indian Institute of Technology Madras Chennai – 600036

> Updated March 20, 2024

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## Nomenclature

AICTE	All India Council of Technical Education
CFTI	Centrally Funded Technical Institute (as declared by MoE) HTRA
CGPA	Cumulative Grade Point Average
CSIR	Council of Scientific and Industrial Research
DC	Doctoral Committee for PhD scholars
DST	Department of Science and Technology in India
GTC	General Test Committee for MS scholars
HTRA	Half-time Research Assistantship awarded by IITM
HoD	Head of the Department
IC&SR	Center for Industrial Consultancy & Sponsored Research at IITM
IIM	An Indian Institute of Management under MoE, India
IISc	Indian Institute of Science, Bengaluru
IIT	An Indian Institute of Technology under MoE, India
IITM	Indian Institute of Technology Madras
JRF	Junior Research Fellowship
MoU	Memorandum of Understanding
PG	Postgraduate degree
QIP	Quality Improvement Program of AICTE
R&D	Research and Development
RKA	Registration Kept Alive
UG	Undergraduate degree
UGC	University Grants Commission

	DEGREES
Ph.D	<ul><li>Doctor of Philosophy</li><li>Regular Ph.D for those joining after a Master's degree</li></ul>
	• Direct admission to M.S.+Ph.D. in Engineering/ Manager for those joining after BE/ BTech
	<ul> <li>Upgraded Ph.D in Engineering/ Management for those upg ing from MS or M.Tech</li> </ul>
M.S.	'Master of Science' or 'Master of Science by Research' in Engineering/Technology/Management
M.S.(Entrepreunership)	Master of Science by Research (Entrepreneurship)
M.S(Applied Research)	Master of Science (Applied Research)
M.E	Master of Engineering (2 year programme)
M.Tech.	Master of Technology (2 year programme)
M.Sc	Master of Science (2 year programme in sciences)
M.A	Master of Arts (2 year programme)
M.B.A	Master of Business Administration (2 year programme)
B.E	Bachelor of Engineering (4 year programme)
B.Tech	Bachelor of Technology (4 year programme)

	Examinations			
GATE	Graduate Aptitude Test in Engineering administered by IISc/ IITs			
CSIR-NET	National Eligibility Test administered by CSIR for award of JRF in Physical, Chemical, Mathematical, Earth Atmospheric Ocean & Plan- etary and Life Sciences			
UGC-NET	National Eligibility Test administered by UGC for JRF award in Hu manities, Social Sciences, Environmental Sciences, Forensic Science Computer Science & Applications, Electronic Science.			
CAT	Common Admission Test administered by IIMs Graduate Managemen Admission Council (GMAC)			
TOEFL	Test Of English as Foreign Language administered by ETS			

# **ORDINANCES AND REGULATIONS**

## **MS Ordinances**

- MS-O.1 A candidate who has qualified for the award of the Bachelor's degree in engineer ing/technology from a recognized institute or university in a discipline as prescribed in
   the regulations of the Senate is eligible to apply for the Master of Science by Research
   (M.S) programme in engineering/entrepreneurship/management of this Institute.
- <sup>49</sup> MS-O.2 A candidate who has qualified for the award of the M.Sc degree in basic sciences <sup>50</sup> from a recognized institute or university or a Master's degree in certain areas ap-<sup>51</sup> proved by the Senate is also eligible to apply for the MS programme in engineer-<sup>52</sup> ing/entrepreneurship/management of this Institute.
- <sup>53</sup> MS-O.3 The award of the MS degree shall be in accordance with the regulations of the Senate of <sup>54</sup> this Institute.

## **MS REGULATIONS**

### 55 MS-R.1 CATEGORIES OF ADMISSION

<sup>56</sup> Candidates will be admitted to the M.S programme of the Indian Institute of Technology Madras

57 (IITM) in engineering/entrepreneurship/management under one of the following categories.

Category	Remarks
Regular-HTRA	Half-Time Research Assistantship (HTRA) from IITM.
Regular-Fellowship	Funding from outside agencies such as UGC, CSIR, industry etc.
Regular-Project-HTRA	Funding through a project administered by IC&SR at IITM.
Regular-Project-NHTRA	Funding through a project administered by IC&SR at IITM without eligibility for conversion to HTRA.
External	Sponsored by and employed in an industry, organization, or institu- tion having R&D facilities and recognized by DST(DSIR) or IITM. Candidates should have at least 2 years of relevant work experience.
Part-time	Should be employed in a reputed industry, organization, or institution located within commutable distance of IITM. Candidates should have at least 2 years of relevant work experience.
Staff	Should be employed as a permanent staff member of IITM with at least 2 years of experience.

60 (a) Scholars registered for any of the Regular categories are considered full-time scholars.

(b) For admission under **Regular-HTRA**, **Regular-Fellowship** and the **Regular-Project-HTRA** 

category, departments will adopt common shortlisting criteria and have a common merit list.

- 63 (c) **Project-NHTRA** admissions can happen in two ways:
- (i) Project staff of IC&SR who have successfully completed two approved courses at IITM 64 (total credits  $\geq$  18) with CGPA  $\geq$  7.5, and have obtained at least a 'C' grade in each 65 course can be selected through an interview without having to take a written test. They 66 can join the programme after gaining at least 6 months experience in a project. 67 (ii) Project staff of IC&SR who have gained at least 6 months experience in a project can be 68 selected through a written test and interview. This selection will be for project-NHTRA 69 applicants who do not meet the course requirement criteria. 70 The provisions above are also applicable to project staff working in the IITM research park. 71 286<sup>th</sup> Senate Res. № 96/2019 291<sup>st</sup> Senate Res. № 5/2021 72 (d) A research scholar under the **External** category will carry out his/her research work in his/her 73 organization under the supervision of a guide at IITM, and a co-guide employed in the orga-74 nization. An external scholar employed in the IITM Research Park need not have a co-guide 75 from his/her organization. 76 (e) **External and part-time** scholars have a minimum residential requirement of one semester. 77 Part-time scholars will be permitted to undergo course work without the residential requirement, 78 with the permission of their employer. 79 (f) Scholars admitted under the Regular-HTRA category can move to the Regular-Project-HTRA 80 category and revert to the Regular-HTRA category, if necessary. 81 (g) Scholars admitted under the Regular-Project-HTRA category can move to the Regular-HTRA 82 category, provided they have been funded by a project for a duration of at least one year. 83 (h) Scholars admitted under the Project-NHTRA/Part-time/External categories cannot move to the 84 Regular-HTRA category at any time. 286<sup>th</sup> Senate Res. № 96/2019 85 (i) Interdisciplinary (ID) M.S programme: Admission of scholars to the ID programme will be 86 based on an interdisciplinary research proposal, needed as part of the selection procedure 87 formulated by the IDRP committee. (Please refer to the admission brochure for details of the 88 areas of research.) 89 (j) The degree for **M.S** (Applied Research) will be Master of Science by Research as awarded 90 for the regular M.S programme. 91 (k) The medium of instruction and communication for academic research shall be English. 92 **MS-R.2 ELIGIBILITY FOR ADMISSION TO THE M.S PROGRAMME** 93
- <sup>94</sup> All the applicants should have a good academic record.
- <sup>95</sup> The minimum qualifications for each of the various modes are as follows:
- <sup>96</sup> These qualifications should be in relevant areas/disciplines as provided by the respective de-
- partments in the brochure released with the admission notice. The brochure will also include
- <sup>98</sup> details about inter-disciplinary research areas. Short-listed candidates will be called for a "test and
- <sup>99</sup> **interview**" or "interview" by a selection committee in the respective departments.

### MS-R.2.1 Minimum Qualifications for Admission to the M.S programme

<sup>101</sup> Candidates applying for the M.S programme in one of the following areas need to have **any one** of

the minimum qualifications mentioned in the table below.

Area	Minimum Qualifications		
	Educational Qualifications	Additional Qualifications	
Engineering	<ul> <li>B.E/ B.Tech/ 4 year online / any recognised 4 year B.sc/ 4 year BS of IITs/ CFTIs /UGC or Master's degree in a relevant discipline, or equivalent. 301st Senate Res. № 5/2023</li> <li>Or</li> <li>Associate Membership of the follow- ing professional bodies of the discipline, provided they have passed parts A and B of the membership examinations: The Institution of Engineers (India)(Civil, Mechanical, Electrical and Electronics, Electronics and Communications), The Aeronautical Society of India, The In- dian Institute of Metals, The Indian In- stitute of Chemical Engineers, The In- stitute of Electronics &amp; Telecommunica- tion Engineering and other professional bodies approved by the Senate from time to time.</li> <li>Or</li> <li>4 year online or any recognized 4 year BSc / 4 Year BS of IITs/ CFTIs/ UGC 305<sup>th</sup> Senate Res. № 51/2023</li> <li>For Computer Science and Engi- neering. BSc (Maths/Stats/CS) +MSc (Maths/Stats/CS) holders from any recognized Institute/ Uni- versity, provided they have a valid GATE score (in CS/MA), or UGC- NET/CSIRNET/ NBHM/Inspire or equivalent qualification tenable for the year of registration, are also eligible. 299<sup>th</sup> Senate Res. № 57/2022</li> </ul>	Valid GATE score is required for Regular-HTRA, Regular-Fellowship and Regular- Project-HTRA categories, except 4 yr B.S/4 yr B.Sc./B.E/B.Tech from a Centrally Funded Technical Institute (CFTI) with CGPA $\geq 8$ . 301 <sup>st</sup> Senate Res. Nº 5/2023	

Applied Mechanics	B.E/B.Tech or Master's degree in a relevant discipline, or equiva- lent. In addition, applicants with an MBBS degree, having taken math- ematics in their +2, and having at least 2 years research/teaching ex- perience are eligible for the spon- sored M.S. programme in the area of biomedical engineering. 295 <sup>th</sup> Senate Res. № 2/2022	Valid GATE score is re- quired for Regular-HTRA, Regular-Fellowship and Regular-Project-HTRA cate- gories, except 4 yr B.S/4 yr B.Sc./B.E/B.Tech from a Cen- trally Funded Technical Insti- tute (CFTI) with CGPA $\geq 8$ . <b>301</b> <sup>st</sup> Senate Res. Nº 5/2023
Engineering Design	B.E/B.Tech or Master's degree in Aerospace, Automobile, Biomed- ical, Civil, Computer Science, Design, Electrical, Electronics, Engineering Design, Engineer- ing Physics, Instrumentation, In- dustrial Mathematics, Mechani- cal, Metallurgical, Naval Archi- tecture, Production/Manufacturing Engineering.	Valid GATE score is re- quired for Regular-HTRA, Regular-Fellowship and Regular-Project-HTRA cate- gories, except 4 yr B.S/4 yr B.Sc./B.E/B.Tech from a Cen- trally Funded Technical Insti- tute (CFTI) with CGPA $\geq 8$ . <b>301st Senate Res.</b> Nº 5/2023
Entrepreneurship	B.E/B.Tech or Master's degree in a relevant discipline or equivalent,or any postgraduate degree e.g. M.A. or M.Com.	Valid GATE score is re- quired for Regular-HTRA, Regular-Fellowship and Regular-Project-HTRA cate- gories, except 4 yr B.S/4 yr B.Sc./B.E/B.Tech from a Cen- trally Funded Technical Insti- tute (CFTI) with CGPA $\geq 8$ . 301 <sup>st</sup> Senate Res. Nº 5/2023

Management	B.E/B.Tech or Master's de- gree in a relevant discipline or equivalent,or any postgrad- uate degree e.g. M.A. or M.Com.	Valid GATE score is re- quired for Regular-HTRA, Regular-Fellowship and Regular-Project-HTRA cate- gories, except 4 yr B.S/4 yr B.Sc./B.E/B.Tech from a Cen- trally Funded Technical Insti- tute (CFTI) with CGPA $\geq 8$ . <b>280<sup>th</sup> Senate Res.</b> $\mathbb{N}^2$ 33/2018 Valid GRE/GMAT eligi- ble only for foreign students' admission without HTRA.
Medical Sciences and Technology	Bachelor degree in Biomed- ical, Biotechnology, Biologi- cal//Biochemical Sciences, Chem- ical, Civil, Computer Science, Electrical, Electronics, Engi- neering Physics, Instrumentation, Mechanical, Mechatronics, Metal- lurgical, Material Science, Naval Architecture, Production / Manu- facturing, Robotics/Automation, BS in Electronic Systems, BS in Data science, or Bachelor degree in Design (Engineering, B.Des), Bachelor of Physiother- apy/Sports Physiotherapy/Sports Science, MBBS/BDS degree. 305 <sup>th</sup> Senate Res.№ 51/2023	Duration of the eligible Bach- elor degree programs should not be less than 4 years. Candidates possessing MBBS/BDS degree require a valid NEET PG qualifying score, to apply under the Half-time Teaching/Research Assistantship (HTRA) scheme. GATE Branches Accepted: BT, BM, EE, EC, IN, CS, ME, CE, CH, XL. 305 <sup>th</sup> Senate Res. № 51/2023
Data Science and Artificial Intelligence	Any 4 year UG degree of IITs / CFTIs / UGC / AICTE. In case of a 3 year UG degree (such as B.Sc.), an additional Master's degree would be required for eligi- bility. 306 <sup>th</sup> Senate Res. № A.14	Valid GATE score in any discipline. 306 <sup>th</sup> Senate Res. № A.14

### 103 **Notes**

(a) The departmental selection committees may set more stringent criteria than the minimum educational qualifications listed above.

- (b) For external/part-time/staff categories, the requirement of a valid GATE score or CSIR/UGC
   JRF or Lectureship/NBHM/CAT or equivalent qualification is waived.
- (c) The departmental selection committees may consider meritorious candidates from disciplines
   other than those listed in the admission brochure, if there is a good match between the educa tional/research backgrounds of the candidates and the proposed areas of research.
- (d) All candidates applying for M.S (Entrepreneurship) must submit a proposal, which is their
   own idea or apply against a listed idea<sup>1</sup>. A screening committee will evaluate the proposals and shortlist applications to be forwarded to the selection committee for interview.
   292<sup>nd</sup> Senate Res. № 23/2021

# MS-R.2.2 Conversion of B.Tech & Dual-Degree Students of IITM at the end of the 6th semester to the B.Tech + M.S (Entrepreneurship) programme

- (a) B.Tech. students at the end of their 6th semester can convert to B.Tech. + M.S (Entrepreneurship) programme if they have a CGPA  $\geq 8.0$  or a valid GATE score.
- (b) Dual-degree students at the end of their 6th semester can convert to the B.Tech + M.S (Entrepreneurship) programme, if they have a CGPA  $\geq$  7.0. For HTRA, the students should have a CGPA  $\geq$  8.0 or a valid GATE score. The students have to complete the B.Tech requirements in the parent department.
- (c) The application (including the proposal) has to be routed through the faculty advisor and HoD.
   It will be treated as a new admission to the M.S (Entrepreneurship) programme.
- (d) Students who have upgraded to the M.S (Entrepreneurship) programme cannot be further
   upgraded to the Ph.D programme. They can revert to the B.Tech. programme after a minimum
   period of two years from the date of upgradation, provided they fulfill all B.Tech. requirements.
   They can appear in placements only once.

## 129 MS-R.3 FOREIGN NATIONALS

- <sup>130</sup> Foreign nationals are those with foreign passports, including those who are PIO/OCI card holders.
- (a) Foreign nationals can only register as full-time scholars. They are not eligible to receive HTRA
   support.
- (b) Foreign nationals who are PIO/OCI card holders are eligible for admission with the fee pre scribed for Indian nationals.
- (c) Foreign nationals with eligible degrees from Indian universities (MS-R.2) will be treated on
   par with Indian nationals for admission, but with the prescribed fee for foreign nationals.
- (d) Foreign nationals with foreign degrees must meet the minimum educational requirements
   equivalent to an Indian degree (MS-R.2) in the relevant disciplines. They should have a valid
   score in the GMAT/GRE (or equivalent) examination in the relevant discipline.
- (e) Foreign nationals whose medium of instruction in their UG and PG programmes was not
   English should satisfy one of the following:

<sup>&</sup>lt;sup>1</sup>The ideas for exploitation will be submitted through a call for proposals/projects from faculty members, similar to the process followed in IDRP submissions.

- 142
- (a) IELTS with a minimum score of 6.5 (overall)
- (b) TOEFL (internet based) : 80 (overall)

### 144 **MS-R.4 Selection Procedure**

Eligible candidates possessing the minimum educational qualifications (as per MS-R.2), and satisfying additional and possibly stiffer criteria set by the departments, will be called for a "test and interview" or "interview" by departmental selection committees.

For candidates who have obtained their UG/PG degrees more than 10 years earlier (as on the last date for the receipt of completed applications), a written test will be conducted.

- <sup>150</sup> Applications of foreign nationals may be considered without a test/interview.
- Based on the academic record and the performance of the candidates in the test/interview, the departmental selection committees will recommend suitable candidates to the Chairperson, Senate.
- <sup>153</sup> Candidates applying to the M.S. (Entrepreneurship) programme will be evaluated by a committee

<sup>154</sup> set-up by the Dean(AR). Candidates found suitable will be recommended by the Dean(AR) to the

<sup>155</sup> Chairperson, Senate. 292<sup>nd</sup> Senate Res. № 23/2021

### 156 **MS-R.5 Admission**

- (a) Candidates whose selection is approved by the Chairperson, Senate will be admitted to the
   M.S programme after they pay the prescribed fee.
- (b) Candidates admitted to the M.S (Entrepreneurship) programme are required to undergo a common course list including ID5101, ID5102 and/or Incubate from the Gururaj Deshpande Center. At the end of the coursework, candidates have to submit a feasibility report on the product(s) proposed to be developed by them at IITM. 292<sup>nd</sup> Senate Res. № 23/2021

### 163 MS-R.6 REGISTRATION

<sup>164</sup> A scholar's date of joining is the date of registration.

### 165 **MS-R.7 Guides and Co-Guides**

- To supervise the progress of the scholar, an IITM faculty member shall be nominated as a guide by the Dean(AR).
- In addition to the guide, at most one faculty member from IITM may be nominated as a co-guide.
- A co-guide from outside IITM may be allowed with the approval of the Chairperson, Senate.
- The minimum educational qualification for a co-guide is Master's degree in Engineering/
   Management/ Sciences/ Humanities and Social Sciences with adequate professional experience
   in the relevant field. 298<sup>th</sup> Senate Res. № 44/2022
- <sup>174</sup> In addition to the above,

- (a) If the guide from IITM proceeds on leave for more than a year, another faculty member may
   be appointed as a co-guide.
- (b) A faculty member, who has guided a candidate for at least 2 years, will continue to be a guide
   post-retirement. However, another member, with at least 3 years of service remaining, will be
   nominated as a co-guide at the time of the guide's retirement.
- (c) A faculty member retiring within 2 years may be permitted to be a guide for a new scholar.
   However, another faculty member with at least 3 years of service remaining will be appointed as a co-guide when the scholar joins IITM. On retirement, the faculty member will continue to be a guide.
- (d) The appointment of co-guide, based on the recommendation of the General Test Committee
   (GTC), should be made within one year from the date of joining. Requests received after this
   will be considered by the Dean(AR) on a case-by-case basis.
- (e) The GTC may recommend change of guide/co-guides or appointment of a co-guide for valid
   reasons.
- (f) CSIR/ other Emeritus Fellows / Scientists / Emeritus Professors, currently holding office at IITM with an appointment period of at least one year, can be a co-guide along with a guide
   (who has at least 3 years of service remaining).
- (g) Faculty from other CFTIs/universities or experts from industries with a Master's degree, and 192 with adequate professional experience in the relevant field may be appointed as a co-guide, 193 based on the recommendation of the GTC. If the co-guide's organization does not have an 194 MoU with IITM, he/she shall sign an Intellectual Property Rights (IPR) and Memorandum 195 of Agreement (MoA). IITM will have no financial obligation to the co-guide. The co-guide 196 approval by the Dean(AR) will be provisional, subject to his/her appointment as an adjunct 197 faculty by BoG within 6 months of the provisional approval. The term for such adjunct faculty 198 will be for 5 years from the date of appointment. 199
- The request to appoint a co-guide as adjunct faculty should be sent to the Dean(Admin) along with the recommendation of the departmental consultative committee (DCC). Only adjunct faculty of IIT Madras are eligible to serve as co-guide. 281st Senate Res.  $\mathbb{N}^2$  72/2018
- (h) Co-guides of external category scholars from industries need not be adjunct faculty.
   281<sup>st</sup> Senate Res. № 72/2018

## <sup>205</sup> MS-R.8 General Test Committee

- <sup>206</sup> A General Test Committee (GTC) shall be constituted to periodically assess the scholar's progress.
- <sup>207</sup> The following is the composition of the GTC:
| HoD (or his/her nominee)  | Chairperson of the GTC   |
|---|--|
| Guide/Co-Guide*   | Member(s)  |
| Minimum of 1 departmental faculty member **                           | Members nominated by the Chairperson, Senate                         |
| Minimum of 1 faculty member from al-<br>lied departments/institutions | (or his/her nominee) from the panel names sug-<br>gested by the HoD. |

\* co-guide is optional

\*\* for the interdisciplinary M.S programme, it is one member from the primary department

#### **For M.S (Entrepreneurship)**

HoD of main guide's department	Chairperson of the GTC
Guide /co-guide*	Member(s)
1-2 members from the Institute 0-1 members from outside the institute	Members nominated by the Chairperson, Senate (or his/her nominee) from the panel names sug- gested by the HoD, with at least 1 member from the Program Coordination Committee (PCC).

\* co-guide is optional

Advisors from industry are encouraged. However, they will not be part of the GTC, unless approved by the Dean(AR).

#### 213 MS-R.8.1 Additional Guidelines for the GTC

If the HoD is the guide, the senior-most professor/previous HoD will be nominated as the Chairperson
 GTC by the Chairperson, Senate (or his/her nominee).

(1) The Chairperson, GTC must attend the thesis submission approval and the viva-voce meetings.

- (2) If a GTC member goes on leave for more than a year or resigns/retires from IITM, the
   Chairperson, Senate (or his/her nominee) will nominate another member on the suggestion of
   the Chairperson, GTC.
- (3) The GTC members from outside IITM must meet the same eligibility criteria as co-guides
   MS-R.7.
- (4) The GTC shall conduct periodic progress review meetings as outlined in MS-R.10.
- (5) All the GTC members will be invited for all the meetings related to the scholar.
- (6) All the decisions and recommendations made by the GTC shall be minuted and forwarded tothe Dean(AR).

#### 226 MS-R.9 ENROLLMENT

- A scholar is required to enrol every semester after paying the requisite fees, until the submission of the thesis.
- Enrolment has to be completed by the stipulated date, and should be approved by the HoD.
- Enrolment will be cancelled if progress is not satisfactory.
- Scholars belonging to the external category/part-time/RKA, and those who have temporarily withdrawn, or are on maternity leave, and those on academic duty with prior permission from the Institute, are eligible to enroll in absentia during the stipulated period after payment of the requisite fee.

#### 235 MS-R.10 M.S REQUIREMENTS

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<sup>236</sup> The requirements for the completion of the M.S are listed below.

Requirements	Expected time frame	Section
0thGTCmeeting\$295 <sup>th</sup> Senate Res. № 9/2022	Start of programme	MS-R.11
Course work	Within two semesters	MS-R.11
Mid-term review	Within18months#295 <sup>th</sup> Senate Res. № 9/2022	
Open seminar	Within 27 months	
Thesis-Submission Approval Meeting 295 <sup>th</sup> Senate Res. № 9/2022	Within 3 months of the open seminar	MS-R.13
M.S viva voce examination, if recomme	ended by the reviewer(s)	MS-R.14

<sup>§</sup> The 0th GTC meeting can be by email circulation. 295<sup>th</sup> Senate Res. № 9/2022

# The 1st GTC meeting should be held within the first 18 months. The scholar is expected to propose and defend his/her research plan. HTRA will continue after 18 months (up to 30 months) only upon the recommendation of the GTC. 295<sup>th</sup> Senate Res. № 9/2022

- (a) Registered scholars should submit a progress report twice during an academic year to the GTC.
   The guide's assessment of the scholar's progress and approval of the Chairperson, GTC is required for enrolment in the subsequent semester.
- (b) Continuance of registration after 2.5 years will depend on the recommendation of the GTC.
- <sup>242</sup> (c) The open seminar is considered to be a GTC meeting.
- (d) Beyond 2.5 years, progress review meetings by the GTC will be held once every 6 months.
- (e) In addition to the above, the HoD/Dean(AR) may convene a special GTC meeting(s) based on
   the request from the scholar/guide, to address any issue(s) with respect to the research progress
   of the scholar.

#### 247 MS-R.11 COURSE WORK

#### 248 **MS-R.11.1 General Guidelines**

- (a) A basket of courses with twice the number of required courses will be recommended by
   the GTC at the start of the programme. Courses shall be at the post-graduate level at
   IITM, and will be prescribed by the GTC in its 0th meeting (possibly via email circulation).
   295<sup>th</sup> Senate Res. № 9/2022
- (b) Changes in the prescribed courses shall be made only by the GTC.
- (c) The GTC may approve courses already undergone by the scholar in other institutions towards
   meeting the course work requirements of IITM. These courses must be equivalent to those
   prescribed, and the scholar's performance in these courses must meet IITM's minimum re quirements. *Courses already undergone by the scholar in IITM or other institutions shall not be considered if they were part of the requirements for the award of any other degree/diploma.*
- (d) Contact courses may be allowed subject to approval of the GTC.
- (e) All courses successfully cleared by the scholar (i.e., grade C or above) will be considered for <u>CGPA calculation</u>. To be eligible for the M.S degree, the CGPA  $\ge$  7.5.
- 262 **295<sup>th</sup> Senate Res. № 9/2022**

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#### MS-R.11.2 Coursework Requirement for Research Scholars

	Discipline	Minimum Course Work	Minimum Credits
4	Engineering/Management/ Entrepreneurship	Five courses out of a basket of 10 courses along with ID6020 and ID6021*	45

\* ID6021 is optional, to be decided by the Department as well as GTC

- (a) The GTC must prescribe a basket of ten courses. The scholar is required to take at least
   five courses out of the prescribed basket along with ID6020 and ID6021 (if required by the
   department). 295<sup>th</sup> Senate Res. № 9/2022
- (b) Research scholars shall obtain a CGPA ≥ 7.50, subject to a minimum of a "C" grade in each of the prescribed courses.
   295<sup>th</sup> Senate Res. № 9/2022
- (c) All courses successfully cleared by the scholar (i.e., completed with a grade of C or better)
   will be considered in the computation of the CGPA. Once a course is successfully completed,
   it cannot be repeated.
- (d) The GTC may reduce the course requirement for B.Tech./dual-degree students upgrading to
   B.Tech+M.S (Entrepreneurship) programme.

#### 275 MS-R.11.3 Grades and CGPA

Based on performance, each scholar is awarded a final grade at the end of the semester in each subject. The grades and the corresponding grade points are as follows:

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Grade	S	А	В	С	D	Е	U
Points	10	9	8	7	6	4	0

<sup>279</sup> The CGPA will be calculated according to the formula

$$CGPA = \frac{\sum C \times GP}{\sum C}$$

where C = credits and GP = the grade point obtained for the course. The sum is over all the successfully completed courses (i.e., those where the grade obtained is 'C' or above).

#### MS-R.12 Upgradation from the M.S to the Ph.D Programme

- (a) Candidates registered for the M.S are eligible for upgradation to the Ph.D programme in the same department, if they have a CGPA $_{i}$ =8 in the prescribed courses completed (at least three of the prescribed courses should have been completed).
- (b) Upgrade requests should be submitted within 2 years from the date of joining. For M.S scholars
   who have completed 2 years, the request for an upgrade may be considered if at least one journal
   paper has been accepted/published.
- (c) After upgrading to the Ph.D programme, an M.S scholar can revert to the M.S programme
   after one semester.
- <sup>291</sup> (d) M.S (Entrepreneurship) scholars cannot upgrade to the Ph.D programme.
- (e) M.S scholars who upgrade their registration to the Ph.D programme are bound by the regula tions of the Ph.D programme.

#### <sup>294</sup> MS-R.13 Thesis and Panel of Examiners

- <sup>295</sup> The M.S thesis is a detailed report of the scholar's research. 295<sup>th</sup> Senate Res. № 9/2022
- (a) The scholar shall circulate the thesis to the GTC after satisfactory completion of courses,
   research and the open seminar. The thesis must be submitted within three months of the open
   seminar. The Chairperson, GTC shall then convene a thesis-submission approval meeting. If
   approved by the GTC, the thesis should be submitted by following relevant procedures laid
   down by the academic section. 295<sup>th</sup> Senate Res. № 9/2022
- (b) M.S (Entrepreneurship) scholars shall submit only one business development thesis, focusing
   on the product/solution specifications(technology survey), market segmentation and other
   commercial aspects, validated through a rigorous market survey.
- (c) The Dean(AR) may permit extension of thesis submission time based on valid reasons. Depending upon the nature of publication(s) arising out of the research, the GTC may recommend submission of the thesis as per the following guidelines:

- (i) The thesis shall be submitted to the HoD, if the research (or part thereof) presented in the thesis has been published (accepted) as (i) at least one research paper in a refereed journal of quality acceptable to the GTC, or (ii) at least one full paper in conference proceedings, which is evaluated by two referees (evidence of the rigour of the refereeing process must be submitted by the scholar in the form of editor's communication(s)/referee's comments). The thesis will then be evaluated by one examiner from IITM. The thesis examination process will be handled by the office of the HoD.
- (ii) The thesis shall be submitted to the academic section if there is no publication from the research, or the publication does not meet the criteria given in (i) above. The GTC will suggest the names and addresses of at least 6 examiners chosen from within India, including IIT Madras. The Guide may obtain concurrence of the examiners via email using the thesis abstract and the scholar's list of published works (if any) as inputs to potential examiners. 295<sup>th</sup> Senate Res. № 9/2022 The thesis will be examined by two examiners chosen by the Dean(AR).
- (d) For the M.S (Entrepreneurship) programme, the evaluation must focus on the techno-commercial aspects of the business, with emphasis on business feasibility, methods applied to perform primary market research, and estimation of all elements of the business model. The guides and Chairperson,GTC should find an appropriate set of examiners who are competent to evaluate the techno-economic merit of the thesis.
- (e) For the M.S (Applied Research) programme, the GTC can recommend appropriate methods of review so that the information in the thesis is kept confidential.
- MS-R.14 THESIS REPORTS AND VIVA

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- (a) When the thesis evaluation process is handled by the HoD (as per MS-R.13 (c) (i)) (a)
  - (i) If the examiner declares the thesis as 'commended', the need for a viva-voce examination will be decided based on the comments of the examiner(s) and the scholar's response of these comments. The GTC will conduct the viva-voce.
    - If the performance is satisfactory, the GTC will recommend the award of the M.S degree after appropriate modifications(if any).
  - If the performance is not satisfactory, the scholar shall reappear for the viva-voce examination, not earlier than two weeks and not later than six months from the first examination.
  - If the performance of the research scholar is not satisfactory in the second examination, the matter will be referred to the Senate for a decision.
- (ii) If the examiner recommends that the thesis should be resubmitted after revision, the
   scholar will be allowed to do so within the time stipulated by the GTC, failing which the
   revised thesis will not be accepted, and his/her registration will be cancelled.
- (iii) If the examiner evaluates the thesis as 'not acceptable', the thesis shall be referred to
   another examiner for evaluation.
- (b) When the thesis evaluation process is handled by the Dean (AR) (as per MS-R.13 (c) (ii))

346	(i) If the two examiners declare the thesis as 'commended', the need for a viva-voce exami-
347	nation will be decided based on the comments of the examiner(s) and scholar's response
348	to these comments. The GTC will conduct the viva-voce.
349	• If the performance is satisfactory, the GTC will recommend the award of the MS
350	degree after modifications(if any).
351	• If the performance is not satisfactory, the scholar shall reappear for the viva-voce
352	examination, not earlier than two weeks and not later than six months from the first
353	examination.
354	• If the performance of the research scholar is not satisfactory in the second examina-
355	tion, the matter will be referred to the Dean(AR) for a decision.
356	(ii) If one or both of the examiners recommend(s) that the thesis should be resubmitted after
357 358	revision, the scholar will be allowed to do so within the time stipulated by the GTC, failing which the revised thesis will not be accepted and his/her registration will be cancelled.
000	
359	(iii) If one of the examiners evaluates the thesis as 'not acceptable', the thesis shall be referred
360	to a third examiner for evaluation.
361	(iv) If two examiners evaluate the thesis as 'not acceptable', the thesis will be rejected and the
362	registration will be cancelled.
363	(c) In all other cases not covered by the above regulations, the matter will be referred to the GTC
364	for consideration and recommendation to the Dean(AR).

#### **MS-R.15** MINIMUM AND MAXIMUM DURATION 365

The minimum duration of the M.S programme from the date of registration to the date of submission 366 of thesis shall be 18 months. The minimum residential requirement for the scholars under external 367 or part-time (not employed in the Institute) registrations is one semester. This requirement is waived 368 for external scholars who are employed in the IITM Research Park. 369

M.S scholars shall submit the thesis within 2 1/2 years from the date of registration. The GTC may 370 extend this period up to 1 year for full-time research scholars, with an additional year for research 371 scholars who are external, part-time, or staff members of the Institute. 372

The registration period of the programme will be extended by the duration of the sanctioned maternity 373 leave (up to a maximum period of 180 days). 374

The period of medical leave, duly certified by the Institute Hospital, can be considered by Dean(AR) 375

to extend the registration period of the programme, up to a maximum period of one year. 376

282<sup>nd</sup> Senate Res. Nº 101/2018 377

#### **MS-R.16** Relief from the M.S Programme to Take Up Employment 378

A regular full-time scholar who has a job offer can obtain relief from the programme upon recom-379 mendation by the GTC, if (s)he has completed the minimum residential requirement of 18 months, 380 coursework, and the open seminar. 381

The scholar should keep his/her registration alive by paying the requisite fee every semester. Renewal 382 of the registration each semester is subject to the GTC finding the scholar's progress satisfactory. 383

#### **MS-R.17 WITHDRAWAL FROM THE PROGRAMME**

A scholar may be permitted by the Dean(AR) to withdraw from the programme for a semester or longer for health reasons or any other valid grounds, if duly recommended by the GTC. A scholar will be permitted to discontinue from the programme only for a maximum continuous period of two semesters.

#### **MS-R.18 CANCELLATION OF REGISTRATION**

- (a) The registration of a research scholar who has not enrolled, or whose progress is not found to
   be satisfactory by the GTC is liable to be cancelled.
- (b) The registration of a research scholar who has not submitted his/her thesis before the end of
   the maximum permissible period (MS-R.15) will be cancelled.

#### <sup>394</sup> MS-R.19 Reversion of Scholars Upgraded from the M.S to the Ph.D.

- (a) A scholar may apply for reversion to the M.S programme after one semester from the date of
   upgradation.
- (b) If the scholar does not pass the comprehensive examination in two attempts, he/she will
   be reverted to the M.S programme. The DC will continue to function as the GTC till the
   completion of the requirements for the M.S degree. The scholar must complete the degree
   requirements (MS-R.10) within one year from the date of reversion.

#### <sup>401</sup> MS-R.20 Conversion of Regular/Direct M.S + Ph.D. Registration to 402 THE M.S

A scholar directly admitted to the M.S + Ph.D. programme can apply for conversion to the M.S programme under the same guide, if he/she fulfils all M.S admission criteria for the corresponding year of selection. This option is not available for Regular Ph.D. scholars.

A direct-PhD scholar who did not fulfill the M.S admission criteria for the corresponding year
 of selection can revert to the M.S. programme only after 3 years from the date of admission.
 298<sup>th</sup> Senate Res. № 44/2022

A Regular/Direct M.S + Ph.D scholar in Engineering/Management who does not pass the comprehensive examination in two attempts, may request the DC to convert his/her registration from the Ph.D. to M.S programme under the same guide. If this option is not exercised, his/her registration will be cancelled. The DC may recommend conversion of registration for approval by the Senate.

- (a) The DC will continue to function as the GTC till the completion of the M.S requirements.
- (b) The duration of the scholar's M.S programme shall not be more than three years from the date
   of first registration in the Ph.D programme.
- (c) In its first meeting following the conversion of registration, the GTC may recommend additional
   courses necessary to satisfy the requirements towards the M.S programme.
- (d) The award of HTRA to the scholar will be as per the M.S programme.

Under exceptional circumstances, the DC may recommend cases of the regular Ph.D. scholars
who passed the comprehensive examination for conversion to M.S. Program. In such cases,
the DC should send a detailed justification of the circumstances and a strong recommendation
for Dean (AR)'s consideration. This provision is only expected to be used very sparingly,
after every possible avenue to complete the requirements of the PhD research is explored.
298<sup>th</sup> Senate Res. № 44/2022

#### 425 MS-R.21 Award of the M.S Degree

<sup>426</sup> Upon satisfactory completion of all requirements and the submission of the final thesis, the scholar <sup>427</sup> will be awarded a Master of Science by Research degree on the recommendation of the Senate, and <sup>428</sup> with the approval of the Board of Governors of IITM.

For IITM students upgrading from the B.Tech/dual-degree programme to the B.Tech + M.S (Entrepreneurship) programme, the two degrees will be awarded after successful completion of the requirements of both the programmes.

The award of M.S degrees before the convocation will be considered on request, provided the scholars have completed all the requirements.

#### 434 MS-R.22 DISCIPLINE

Every scholar is required to observe disciplined and decorous behaviour both inside and outside the campus and should not indulge in any activity, which will bring down the prestige of IITM.

Any act of indiscipline of a scholar reported to the Dean(AR) will be referred to a Discipline and Welfare Committee nominated by the Senate. The committee will investigate and recommend suitable punishment if it finds the charges substantiated. The recommendation of the committee will be considered by the Board of Academic Research, which will authorize the Dean(AR) to take appropriate action. The Dean(AR) will report the action taken at the next meeting of the Senate.

**Appeal:** The scholar may appeal to the Chairperson, Senate whose decision will be final.

#### 443 MS-R.23 Power to Modify

Notwithstanding all that has been stated above, the Senate reserves the right to modify any of the above regulations.

# **PhD Ordinances and Regulations**

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# Revised upto the 306th Meeting of the Senate



Indian Institute of Technology Madras Chennai – 600036

> *Updated* April 1, 2024

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# Nomenclature

AICTE	All India Council of Technical Education
CFTI	Centrally Funded Technical Institute (as declared by MoE) HTRA
CGPA	Cumulative Grade Point Average
CSIR	Council of Scientific and Industrial Research
DC	Doctoral Committee for PhD scholars
DST	Department of Science and Technology in India
GTC	General Test Committee for MS scholars
HTRA	Half-time Research Assistantship awarded by IITM
HoD	Head of the Department
IC&SR	Center for Industrial Consultancy & Sponsored Research at IITM
IIM	An Indian Institute of Management under MoE, India
IISc	Indian Institute of Science, Bengaluru
IIT	An Indian Institute of Technology under MoE, India
IITM	Indian Institute of Technology Madras
JRF	Junior Research Fellowship
MoU	Memorandum of Understanding
PG	Postgraduate degree
QIP	Quality Improvement Program of AICTE
R&D	Research and Development
RKA	Registration Kept Alive
UG	Undergraduate degree
UGC	University Grants Commission

	DEGREES		
Ph.D	Doctor of Philosophy <ul> <li>Regular Ph.D for those joining after a Master's degree</li> </ul>		
	<ul> <li>Direct admission to M.S+Ph.D in Engineering/ Management for those joining after B.E/B.Tech</li> </ul>		
	• Upgraded Ph.D in Engineering/ Management for those upgrad- ing from M.S or M.Tech		
M.S	'Master of Science' or 'Master of Science by Research' in Engineer- ing/Technology/Management		
M.S(E)	Master of Science by Research (Entrepreneurship)		
M.S(AR)	Master of Science (Applied Research)		
M.E	Master of Engineering (2 year programme)		
M.Tech.	Master of Technology (2 year programme)		
M.Sc	Master of Science (2 year programme in sciences)		
M.A	Master of Arts (2 year programme)		
M.B.A	Master of Business Administration (2 year programme)		
B.E	Bachelor of Engineering (4 year programme)		
B.Tech	Bachelor of Technology (4 year programme)		

	Examinations
GATE	Graduate Aptitude Test in Engineering administered by IISc/ IITs
CSIR-NET	National Eligibility Test administered by CSIR for award of JRF in Physical, Chemical, Mathematical, Earth Atmospheric Ocean & Plan- etary and Life Sciences
UGC-NET	National Eligibility Test administered by UGC for JRF award in Hu- manities, Social Sciences, Environmental Sciences, Forensic Science, Computer Science & Applications, Electronic Science.
CAT	Common Admission Test administered by IIMs Graduate Management Admission Council (GMAC)
TOEFL	Test Of English as Foreign Language administered by ETS

# **ORDINANCES AND REGULATIONS**

## PhD Ordinances

- PhD-O.1 A candidate who has qualified for the award of the Master's degree from a recognized
   institute or university in a discipline as prescribed in the regulations of the Senate is
   eligible to apply for the PhD programme of this Institute.
- PhD-O.2 A candidate who has qualified for the award of Bachelor's degree, and with a good academic record in the discipline as prescribed in the regulations of the Senate, is eligible to apply for the direct MS + PhD program in engineering/management of this Institute.
- PhD-O.3 The award of the PhD degree shall be in accordance with the regulations of the Senate
   of this Institute.

# **PhD Regulations**

#### 63 PhD-R.1 CATEGORIES OF ADMISSION

- <sup>64</sup> Candidates will be admitted to the Ph.D programme of the Indian Institute of Technology Madras
- 65 (IITM) under one of the following categories, with requirements as given below.

Category	Remarks		
Regular-HTRA	Half-Time Research Assistantship (HTRA) from IITM.		
Regular-Fellowship	Funding from outside agencies such as UGC, CSIR, industry, etc.		
Regular-Project-HTRA	Funding through a project administered by IC&SR at IITM.		
Regular-Project-	Funding through a project administered by IC&SR at IITM without		
NHTRA	eligibility for conversion to HTRA.		
External	Sponsored by and employed in an industry, organization, or institution		
	having R&D facilities and recognized by DST(DSIR) or IITM. Candi-		
	dates should have at least 2 years of relevant work experience.		
	International Faculty can apply to the PhD programme at IIT Madras		
	under the External Category. A Co guide at the home institution is not		
	needed for such candidates. 298 <sup>th</sup> Senate Res. № 44/2022		
Part-time	Should be employed in a reputed industry, organization, or institution		
	located within commutable distance of IITM. Candidates should have at		
	least 2 years of relevant work experience.		
Staff	Should be employed as a permanent staff member of IITM with at least		
	2 years of experience.		
QIP	Should be sponsored by AICTE under the Quality Improvement Program		
	(QIP) through the Centre for Continuing Education (CCE) at IITM.		

<sup>66</sup> (a) Scholars registered for any of the Regular categories are considered full-time scholars.

- (b) For admission under Regular-HTRA, Regular-Fellowship and the Regular-Project-HTRA
   category, departments will adopt common shortlisting criteria and have a common merit list.
- 69 (c) **Project-NHTRA** admissions can happen in two ways:
- (i) Project staff of IC&SR, who have successfully completed two approved courses at IITM (total credits  $\geq$  18) with CGPA  $\geq$  7.5, and have obtained at least a 'C' grade in each course, can be selected through an interview, without having to take a written test. They can join the programme after gaining at least 12 months experience in a project.
- (ii) Project staff of IC&SR, who have gained at least 12 months experience in a project, can be
   selected through a written test and interview. This selection will be for project-NHTRA
   applicants who do not meet the course requirement criteria.
- The provisions above are also applicable to project staff working in the IITM research park.
   286<sup>th</sup> Senate Res. № 96/2019
   291<sup>st</sup> Senate Res. № 5/2021
- (d) A research scholar under the External category will carry out his/her research work in his/her
   organization under the supervision of a guide at IITM, and a co-guide employed in the organization. An external scholar employed in the IITM Research Park need not have a co-guide
   from his/her organization.
- (e) External and part-time scholars have a minimum residential requirement of one semester.
   Part-time scholars will be permitted to undergo course work without the residential requirement,
   with the permission of their employer.
- (f) Scholars admitted under the Regular-HTRA category can move to the Regular-Project-HTRA category and revert to the Regular-HTRA category, if necessary.
- (g) Scholars admitted under the Regular-Project-HTRA category can move to the Regular-HTRA category, provided they have been funded by a project for a duration of at least one year.
- (h) Scholars admitted under the Project-NHTRA/Part-time/External categories cannot move to the
   Regular-HTRA category at any time. 286<sup>th</sup> Senate Res. № 96/2019
- (i) Interdisciplinary (ID) Ph.D programme: Admission of scholars to the ID programme will
   be based on an interdisciplinary research proposal, needed as part of the selection procedure
   formulated by the IDRP committee. (Please refer to the admission brochure for details of the
   areas of research.)
- (j) The medium of instruction and communication for academic research shall be English (eg. DC Reports, synopsis, title of the thesis in the degree certificate, seminar presentation etc.)
   Research publications arising out of the Ph.D work can be in any appropriate language. For
   Ph.D theses, the language to be used will be English. However, if the subject matter so requires,
   the thesis can be written in any language with the approval of the doctoral committee. The
   thesis and its English-translated version, certified by the guide(s), must be submitted together
   for evaluation. 278<sup>th</sup> Senate Res. № 88/2017

## <sup>103</sup> PhD-R.2 ELIGIBILITY FOR REGULAR PH.D, DIRECT ADMISSION TO THE <sup>104</sup> M.S+PH.D PROGRAMME, UPGRADED PH.D

#### <sup>105</sup> All the applicants should have a good academic record.

- <sup>106</sup> There are three modes of admission in which a candidate can be admitted to the Ph.D programme –
- <sup>107</sup> regular Ph.D, direct M.S + Ph.D and upgraded Ph.D.
- <sup>108</sup> The minimum qualifications for each of the various modes are as follows:

These qualifications should be in relevant areas/disciplines as provided by the respective departments in the brochure released with the admission notice.

The brochure will also include details about inter-disciplinary research areas. Short-listed candidates

will be called for a "**test and interview**" or "**interview**" by a selection committee in the respective

113 departments.

#### PhD-R.2.1 Minimum Qualifications for Admission to the Regular Ph.D programme

Candidates applying for the Ph.D programme in one of the following areas need to have **any one** of the minimum qualifications mentioned in the table below.

Area	Minimum Qualifications			
	Educational Qualifications	Additional Qualifications		
Engineering	<ul> <li>M.E/M.Tech/M.S by Research in Engineering/5-year integrated Masters/Dual Degree in engineer- ing.</li> <li>2 year M.Sc from IITs (entry through JAM) with CGPA ≥ 8</li> <li>B.S+M.S (5-year integrated) from CFTI with CGPA ≥ 8</li> </ul>	None		

- M.Sc from any recognized university or Institute.
- For applied mechanics, M.Sc degree holders in physics, mathematics, statistics, electronics, instrumentation, chemistry, nanoscience, nanotechnology, material science, and with a good academic record from any recognized university/institute are also eligible.
   295<sup>th</sup> Senate Res. № /2022
- For civil engineering, M.Sc degree holders in the relevant discipline from any recognized university/institute are eligible.
   278<sup>th</sup> Senate Res. № 73/2017
- For electrical engineering, M.Sc degree holders with a good academic record from any recognized university/institute are also eligible. 295<sup>th</sup> Senate Res. № /2022
- For Computer Science and Engineering, BSc (Maths/Stats/CS) + MSc (Maths/Stats/CS) holders from any recognized In-University provided stitute/ valid GATE they have а score (in CS/MA), or UGC-NET/CSIR NET/NBHM/Inspire equivalent qualification or tenable for the year of registration, are also eligible. 299<sup>th</sup> Senate Res. № 57/2022

Valid GATE score/ UGC-NET/CSIR-NET/NBHM/ Inspire or equivalent qualification tenable for the year of registration. In case of candidates with more than 5 years relevant experience after the M.Sc, the requirement of a test score may be waived by the selection committee.

Engineering Design	Master's degree in Aerospace, Au- tomobile, Biomedical, Civil, Com- puter Science, Electrical, Elec- tronics, Engineering Design, Engi- neering Physics, Instrumentation, Mechanical, Metallurgical, M.S (Medicine), M.D, M.D.S with min- imum first class, Naval Archi- tecture, Production/Manufacturing Engineering, <b>or</b> Master's de- gree in Design (M.Des) or M.Tech (Industrial Mathematics.) 282 <sup>nd</sup> Senate Res. № 101/2018	
	<ul> <li>M.E/M.Tech or M.S by Research in engineering or 2 year M.Sc from IITs (entry through JAM) with CGPA ≥ 8</li> <li>B.S+M.S, or 5-year integrated de- gree from CFTI</li> </ul>	None
Sciences	M.Sc from IITs with CGPA < 8, M.Sc from other institutions.	Valid GATE score/UGC-NET fellowship/CSIR-NET fellow- ship/NBHM Ph.D scholarship or equivalent qualification, tenable for the current year of admission.
Humanities and Social Sciences	Master's degree/dual-degree or equivalent in a relevant disci- pline and qualifying UGC–NET or JRF/CSIR-JRF/GATE score or equivalent qualification, tenable for the current year in the relevant area or an international-level post grad- uate admission examination such as GRE.	Candidates with only a GRE (or equivalent international-level post graduate admission examination) score are not eligible for HTRA.
Management	Master's degree/two-year PG diploma in relevant discipline and a Bachelor's degree (minimum 5 years of undergraduate and post graduate education) or five-year integrated Master's degree/dual- degree or equivalent in a relevant discipline.	CAT/GATE/UGC-NET/CSIR- NET/GMAT/GRE or equivalent. Candidates with an MBA/two-year PG diploma from a CFTI with CGPA $\geq$ 8 do not need a national- level examination to avail fel- lowship. Candidates with only GRE/GMAT scores not eligible for HTRA.

Medical Sciences and Technology	Master's degree in Biomed- ical, Biotechnology, Biolog- ical/Biochemical Sciences, Chemical, Civil (structural), Computer Science, Engineering Design, Electrical, Electronics, Engineering Physics, Instrumen- tation, Mechanical, Material Science, Naval Architecture, Production/Manufacturing, Robotics/Automation, Data science, or Master's degree in Design (Engineering, M.Des.) or M.Tech. in Industrial Mathe- matics or MS (Medicine), MD, MDS, Master of Physiotherapy/ Sports Physiotherapy/Sports. 305 <sup>th</sup> Senate Res. № 51/2023	M.Sc. graduates require a valid GATE score. 305 <sup>th</sup> Senate Res. № 51/2023
Data Science and Arti- ficial Intelligence	PG degree in Engineering / Technology. 306 <sup>th</sup> Senate Res. № A.14	None

#### 117 **Notes**

- (a) The departmental selection committees may set more stringent criteria than the minimum
   educational qualifications listed above.
- (b) For external/part-time/staff categories, the requirement of a valid GATE score or CSIR/UGC
   JRF or Lectureship/NBHM/CAT or equivalent qualification is waived.
- (c) The departmental selection committees may consider meritorious candidates from disciplines
   other than those listed in the admission brochure, if there is a good match between the educa tional/research backgrounds of the candidates and the proposed areas of research.
- (d) Master's degree (M.E/M.Tech/M.S) implies a two-year PG program from an accredited university.
- (e) Departmental selection committees may consider candidates with a one year PG degree from
   accredited universities for direct admission to the M.S+Ph.D programme PhD-R.2.2. Courses
   completed in the one-year PG program may be considered by the doctoral committee PhD-R.7
   towards the course requirements. Such scholars will be eligible for HTRA only if they qualify
   in GATE or an equivalent national-level examination.

- (f) Ph.D candidates employed in govt. R&D organizations, public-sector undertakings, or
   DST(DSIR) approved organizations with at least 2 years of relevant experience, can be consid ered for selection under the regular-HTRA category for 3 years. This is subject to furnishing a
   "No Objection Certificate" and a commitment letter from the parent organization that they will
   be given study leave without salary for a minimum period of 3 years. At the time of admission,
   such candidates need to submit the relieving order as well as a "leave without pay" sanction
   letter from the parent organization. 281st Senate Res. № 72/2018
- <sup>139</sup> PhD-R.2.2 Minimum Qualifications for Direct admission to M.S+Ph.D
- <sup>140</sup> Candidates with BE/B.Tech are eligible for direct admission to the M.S+Ph.D programme as a regular
- full-time scholar in engineering/management, subject to any one of these requirements:

Educational Qualifications	Additional Qualifications	
B.S/B.E/B.Tech from a Centrally Funded Technical Institute (CFTI) with CGPA $\geq 8$ .	None	
B.S/B.E/B.Tech from a CFTI with CGPA < 8	Valid GATE score	
BE/BTech from any other university, with CGPA $\geq 8$ (or equivalent).	Valid GATE score	
For Computer Science and Engineering, in addition to the above, M.Sc.(Mathematics) or M.Sc.(ComputerScience) from a CFTI, or a highly-recognized institute such as the Indian Statistical Institute or the Chennai Mathematical Institute, and CGPA $\geq 8$ .	Valid GATE(MA) or GATE(CS) score. 284 <sup>th</sup> Senate Res. № 37/2019	
For Engineering Design, MBBS/BDS degree with at least first class, in addition to the above. 282 <sup>nd</sup> Senate Res. № 101/2018	Valid NEET PG qualifying score.	
ForMedicalScienceandTech-nology,MBBS/BDSdegree.305 <sup>th</sup> Senate Res. № 51/2023	Valid NEET PG qualifying score. 305 <sup>th</sup> Senate Res. № 51/2023	
For Data Science and Artificial Intelligence:, Any 4 year UG degree of IITs / CFTIs / UGC / AICTE. or a Master's degree in appropriate Engi- neering / Technology. 306 <sup>th</sup> Senate Res. № A.14	Valid GATE score in AE, AG, BM, BT, CE, CH, CS, DA, EC, EE, ES, IN, MA, ME, MN, MT, NM, PE, PI, ST. 306 <sup>th</sup> Senate Res. № A.14	

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• Regular full-time candidates in their final year prior to graduation may also apply for direct admission to the M.S + Ph.D programme. Admission of such scholars will be subject to their qualifying GATE prior to joining, failing which their admission offer will be canceled.

- External candidates with a proven research record do not need a GATE score.
- <sup>147</sup> In addition, top 10% of the students in their 3rd year of their Bachelor's degree in other institutions
- <sup>148</sup> (which enter into a specific MoU with IITM in this regard) can apply for direct admission to the
- 149 M.S+Ph.D programme.
- (a) Selected students will move to IITM in their 4th year.
- (b) Credits earned during the first year of direct admission to the M.S+Ph.D programme at IITM
   shall have equivalence to credits needed for the 4th year of the BTech in their parent institution.
- (c) These credits will be transferred to that institution for the award of the BTech degree.
- (d) The scholars are eligible for HTRA for 5 years, after completing their first year of stay successfully at IITM and qualifying in GATE. Students from CFTIs with a CGPA  $\geq$  8 on a 10.0 point scale will be eligible for HTRA (without GATE).
- (e) If the student does not perform well in courses at IITM, (s)he will be transferred back to the
   parent institute along with the credits earned.
- (f) The candidate should complete the candidacy viva within 5 semesters after joining IITM.
- (g) A student who is deemed incompetent *or is otherwise unable to continue* in the direct M.S +
   Ph.D program will be allowed to drop out at any time after the 5th year of joining the BTech
   programme. The student's BTech credits completed at IITM will be transferred to the parent
   institute.
- <sup>164</sup> PhD-R.2.3 Minimum Qualifications for Upgrading to the Ph.D Programme
- Candidates registered for M.S/MTech/MSc at IITM are eligible for upgradation to the Ph.D program
   in the same department, if they satisfy the following criteria:
- (a) For M.Tech completed four courses during the first semester and obtained a CGPA  $\geq 8$ . 290<sup>th</sup> Senate Res. Nº 65/2020
- (b) For M.Sc. completed all the courses prescribed for the first 3 semesters, and with CGPA  $\geq 8$ .
- (c) For M.S. CGPA  $\geq$  8 in the prescribed courses, with a minimum of three courses completed.

<sup>171</sup> Upgrade requests should be submitted within 2 years from the date of joining. For M.S scholars who <sup>172</sup> have completed 2 years, the request for an upgrade may be considered if at least one journal paper <sup>173</sup> has been accepted/published.

#### PhD-R.2.4 Option of Getting Two Degrees for Direct M.S+Ph.D and Upgraded Ph.D

<sup>175</sup> Direct M.S + Ph.D as well as upgraded Ph.D scholars are eligible to receive two degrees (MS/MTech/MSc

<sup>176</sup> & Ph.D) if they have met the course requirements of the respective Master's programme and all the

requirements of the Ph.D programme, as given in PhD-R.10 and PhD-R.11. The provisional certifi-

<sup>178</sup> cate for the master's degree will be issued to the scholars on approval of the Ph.D synopsis by the

179 DC.

#### <sup>180</sup> PhD-R.2.5 M.Tech+Ph.D Dual-Degree program in Engineering Design Department

<sup>181</sup> The selection of candidates will be through the direct-Ph.D admission process.

<sup>182</sup> 295<sup>th</sup> Senate Res. № 9/2022

#### 183 PhD-R.3 Foreign Nationals

- <sup>184</sup> Foreign nationals are those with foreign passports, including those who are PIO/OCI card holders.
- (a) Foreign nationals can only register as full-time scholars. They are not eligible to receive HTRA
   support.
- (b) Foreign nationals who are PIO/OCI card holders are eligible for admission with the fee pre scribed for Indian nationals.
- (c) Foreign nationals with eligible degrees from Indian universities (PhD-R.2) will be treated on
   par with Indian nationals for admission, but with the prescribed fee for foreign nationals.
- (d) Foreign nationals with foreign degrees must meet the minimum educational requirements
   equivalent to an Indian degree (PhD-R.2) in the relevant disciplines. They should have a valid
   score in the GMAT/GRE (or equivalent) examination in the relevant discipline.
- (e) Foreign nationals whose medium of instruction in their UG and PG programmes was not
   English should satisfy one of the following:
- (a) IELTS with a minimum score of 6.5 (overall)
- <sup>197</sup> (b) TOEFL (internet based) : 80 (overall)

#### <sup>198</sup> PhD-R.4 Selection Procedure

Eligible candidates possessing the minimum educational qualifications (as per PhD-R.2), and satisfying additional and possibly stiffer criteria set by the departments, will be called for a "test and interview" or "interview" by departmental selection committees.

For candidates who have obtained their UG/PG degrees more than 10 years earlier (as on the last date for the receipt of completed applications), a written test will be conducted.

<sup>204</sup> Applications of foreign nationals may be considered without a test/interview.

Based on the academic record and the performance of the candidates in the test/interview, the departmental selection committees will recommend suitable candidates to the Chairperson, Senate.

#### 207 PhD-R.5 Admission

(a) Candidates whose selection is approved by the Chairperson, Senate will be admitted to the
 Ph.D program after payment of prescribed fees.

#### 210 PhD-R.6 REGISTRATION

A scholar's date of joining is the date of registration.

#### 212 PhD-R.7 Guides and Co-Guides

<sup>213</sup> Guide allocation should be completed within 4 months of the scholar joining the Institute.

#### 214 **305<sup>th</sup> Senate Res. № 48/2023**

- To supervise the progress of the scholar, an IITM faculty member shall be nominated as a guide by the Dean(AR).
- In addition to the guide, at most one faculty member from IITM may be nominated as a co-guide.
- A co-guide from outside IITM may be allowed with the approval of the Chairperson, Senate.
- The minimum educational qualification for a co-guide is Master's degree in Engineering/
   Management/ Sciences/ Humanities and Social Sciences with adequate professional
   experience in the relevant field. 298<sup>th</sup> Senate Res. № 44/2022
- In addition to the above,
- (a) If the guide from IITM proceeds on leave for more than a year, another faculty member may
   be appointed as a co-guide.
- (b) A faculty member retiring within 5 years may be permitted to be a guide for a new scholar.
  However, another faculty member with at least 7 years of remaining service at IITM will
  be appointed as a co-guide when the scholar joins IITM. On retirement, the co-guide will
  become the main guide and the retiring faculty member will continue as a co-guide. Before
  allotment, the Head of the Department will evaluate the graduating capacity of the faculty and
  consider the average time scholars take to graduate while working with the concerned faculty.
  305<sup>th</sup> Senate Res. № 48/2023
- (c) The appointment of co-guide, based on the recommendation of the Doctoral Committee (DC),
   should be made within one year from the date of joining. Requests received after this will be
   considered by the Dean(AR) on a case-by-case basis.
- (d) The DC may recommend change of guide/co-guides or appointment of a co-guide for valid
   reasons.
- (e) CSIR/ other Emeritus Fellows / Scientists / Emeritus Professors, currently holding office at IITM with an appointment period of at least one year, can be a co-guide along with a guide (who has at least 3 years of service remaining).
- (f) Faculty from other CFTIs/universities or experts from industries with a Master's degree, and 241 with adequate professional experience in the relevant field may be appointed as a co-guide, 242 based on the recommendation of the DC. If the co-guide's organization does not have an 243 MoU with IITM, he/she shall sign an Intellectual Property Rights (IPR) and Memorandum 244 of Agreement (MoA). IITM will have no financial obligation to the co-guide. The co-guide 245 approval by the Dean(AR) will be provisional, subject to his/her appointment as an adjunct 246 faculty by the (Board of Governors) BoG within 6 months of the provisional approval. The 247 term for such adjunct faculty will be for 5 years from the date of appointment. 248

The request to appoint a co-guide as adjunct faculty should be sent to the Dean(Admin) along with the recommendation of the department consultative committee (DCC). *Only adjunct faculty of IIT Madras are eligible to serve as co-guide*. 281st Senate Res. № 72/2018

(g) Co-guides of external category scholars from industries need not be adjunct faculty.
 281<sup>st</sup> Senate Res. № 72/2018

#### 254 PhD-R.8 DOCTORAL COMMITTEE

The DC formation should be completed within 4months of the scholar joining the institute. The Head of the Department (HoD) will intimate to the Dean, Academic Research, for each scholar the area of research, the name(s) of the guide(s) and a panel of names, indicating the area of specialisation of faculty members for constitution of a Doctoral Committee, of the date of joining of the research scholar. The Committee will assess scholars progress periodically. 305<sup>th</sup> Senate Res. № 48/2023

<sup>260</sup> The following is the composition of the Doctoral Committee (DC):

HoD (or his/her nominee)	Chairperson of the DC
Guide/Co-Guide*	Member(s)
Minimum of 2 departmental faculty member <sup>+</sup>	Members nominated by the Chairperson, Senate
Minimum of 1 faculty member from al- lied departments/institutions	(or his/her nominee) from the panel names sug- gested by the HoD.

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\* co-guide is optional.

+ for the interdisciplinary PhD scholars, there will be one member from each of the respective departments of the guides.

<sup>262</sup> There should be at least 4 DC meetings:

- (a) Orientation DC (0th DC): To get the student familiar with the DC members, be made aware of their expectations, responsibilities, and grievance redressal mechanisms. This should be held within two weeks of guide allotment. 305<sup>th</sup> Senate Res. № 48/2023
- (b) Candidacy Examination (DC1) 305<sup>th</sup> Senate Res. № 48/2023
- (c) Progress-Review Seminar (DC2): The scholar shall deliver an open progress review seminar
   within 36 months from the date of joining. The DC will evaluate the seminar. If the seminar is
   not satisfactory, his/her enrollment will be suspended from the date of the seminar. If he/she
   chooses to change the registration from PhD to MS program, the request may be approved based
   on the DC's recommendation. If the DC does not recommend the conversion, the registration
   will be cancelled with effect from the seminar date.
- (d) Thesis-Submission Approval Meeting (DC3): The DC will meet for the thesis-submission approval meeting (DC3) as per the current practice.
   305<sup>th</sup> Senate Res. № 48/2023

In addition, the scholar shall give the open seminar when he/she is ready to present his/her entire work.
The scholar/guide(s) can request additional meetings at any time. 305<sup>th</sup> Senate Res. № 48/2023

- (a) If the HoD is the guide, the senior-most professor/previous HoD will be nominated as the
   Chairperson GTC by the Chairperson, Senate (or his/her nominee).
- (b) The Chairperson, DC must attend synopsis/thesis report/viva-voce meetings.
- (c) If a DC member goes on leave for more than a year or resigns/retires from IITM, the Chair person, Senate (or his/her nominee) will nominate another member on the suggestion of the
   Chairperson, DC.
- (d) The DC members from outside IITM must meet the same eligibility criteria as co-guides
   PhD-R.7.
- (e) The DC shall conduct periodic progress review meetings as outlined in PhD-R.10.
- (f) All the DC members will be invited for all the meetings related to the scholar.
- (g) All the decisions and recommendations made by the DC shall be minuted and forwarded to the
   Dean(AR).

#### 289 PhD-R.9 ENROLLMENT

- (a) A scholar is required to enrol every semester after paying the requisite fees, until the submission
   of the thesis.
- (b) Enrolment has to be completed by the stipulated date, and should be approved by the HoD.
- (c) Enrolment will be cancelled if progress is not satisfactory.
- (d) Scholars belonging to the external category/part-time/RKA, and those who have temporarily withdrawn, or are on maternity leave, and those on academic duty with prior permission from
   the Institute, are eligible to enroll in absentia during the stipulated period after payment of the
   requisite fee.

#### 298 PhD-R.10 Ph.D REQUIREMENTS

<sup>299</sup> The requirements in the order of completion for Ph.D are listed below.

Requirements	Expected time frame	Section
Course work	Within two semesters *	PhD-R.11
candidacy examination	Within three semesters *	PhD-R.12
Research Proposal Seminar (Seminar 1)	Within one year of passing the candidacy examination #	
Mid-term Review	Within 3.5 years of joining	
Research Colloquium (Seminar 2)	At least 6 months after the research proposal seminar and before the thesis approval meeting295th Senate Res. № 09/2022	
Thesis-Approval Meeting	This meeting should be scheduled within 6 months of the research colloquium. 295 <sup>th</sup> Senate Res. № 09/2022	PhD-R.13, PhD-R.14
Ph.D viva-voce examination		PhD-R.14, PhD-R.15

\* Time frames are shown for Regular Ph.D scholars, only for indicative purposes. The exact time frame for different categories can be found in the respective sections indicated in the third column

# The scholarship (HTRA) will continue beyond 30 months upon successful completion of Course work, candidacy Exam and Research Proposal Seminar.

@ Research colloquium within 24 months of Research Proposal Seminar

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- (a) For Interdisciplinary (ID) scholars, a 0th DC meeting has to be conducted, in which the courses and the syllabus for the candidacy examination will be decided.
- (b) Registered scholars should submit progress reports twice a year (15th June and 15th Dec.)
   to the DC. The guides' assessment of progress and the approval of the Chairperson, DC are
   required to enroll in the subsequent semester.
- (c) The progress report of Ph.D scholars should consist of two parts: a short 2-page summary of
   the work done, research output, and future plans; and a detailed description of the research
   work and results, along with any publications resulting from the thesis work. The scholar
   must also include a self-assessment of the research progress made in the reporting period, with
   suitable justification. 295<sup>th</sup> Senate Res. № 09/2022
- 312(d) Based on the report, DC members should categorize the scholar's progress as excellent, very313good, good, satisfactory, or not satisfactory.295th Senate Res. № 09/2022
- (e) In case the six-monthly progress report is considered 'unsatisfactory' by the guide and/or
   Chairperson DC, a special DC is to be convened to review research progress.
- (f) The oral part of the candidacy examination and the two seminars are considered to be DC meetings.
- (g) Beyond 5 years for regular Ph.D and 6 years for direct/upgraded Ph.D, progress meetings will
   be held once every six months in the presence of the Dean(AR), or his/her nominee.
- (h) In addition to the above, the HoD/Dean(AR) may decide to convene a special DC meeting(s)
   based on the request from the scholar/guide, to address any issue(s) with respect to the research
   progress of the scholar.

#### 323 PhD-R.11 Course Work

#### 324 PhD-R.11.1 General Guidlines

- (a) Courses that meet the minimum requirements shall be at the post-graduate level and will be prescribed by the DC.
- (b) The DC should prescribe a course basket with twice the number of required courses.
   295<sup>th</sup> Senate Res. № 09/2022

(c) The DC may approve courses already undergone by the scholar in other Institutions towards meeting the course work requirements at IITM. These courses must be equivalent to those prescribed, and the scholar's performance in these courses must meet the minimum requirements.
 *Courses already undergone by a scholar in IITM or other institutions shall not be considered if they were part of the requirements for the award of any other degree/ diploma.*

- (d) Contact courses may be allowed subject to the recommendation of the DC and approval by
   Dean(AR).
- (e) Scholars are expected to complete the course work requirements within 2 semesters. Scholars
   joining the Ph.D programme directly after BE/BTech/BS are expected to complete coursework
   within 3 semesters.

Discipline	Mode	Minimum Course Work	Minimum Credits
	Regular	4 courses from the basket prescribed by the DC, ID6020 and ID6021*	36
Engineering	Upgraded from M.S	8 courses from the basket prescribed by the DC, XX6999, XX7999, ID6020 and ID6021*	84 (72 + 12)
	Upgraded from M.Tech		
	Direct M.S+Ph.D		
M.Tech-Ph.D of Engineering De- sign (Dual Degree)	Regular for B.tech in rel- evant discipline in Physics	<ul> <li>Course work: 12 courses prescribed by the DC, ED6999, ED7999. 72 credits need to be completed before appearing for the candidacy viva. Mini-project not required.</li> <li>Exit option (failed twice in the candidacy examination): M.Tech (108 Credits of course work + project work of 85 credits).</li> <li>291st Senate Res. № 05/2021</li> </ul>	120 (108 + 12)

#### <sup>339</sup> PhD-R.11.2 Coursework Requirements for Research Scholars

Physics/	Regular	4 courses from a basket of 8 courses pre- scribed by the DC , ID6020, ID6021*	36	
Chemistry/ Humanities/ Management	Upgraded	4 courses from a basket of 8 courses pre- scribed by the DC , XX6999, XX7999, ID6020, ID6021*	48 (36+12)	
	Direct	8 courses from a basket of 16 courses prescribed by the DC, XX6999, XX7999, ID6020, ID6021*	84 (72+12)	
Mathematics	6 courses from a basket of 12 courses prescribed by the DC, totaling at least 60 credits. In addition, ID6020 and ID6021* must be taken.			
	12 courses	For upgraded scholars, 6 courses from a basket of 12 courses prescribed by the DC, totaling at least 60 credits + XX6999 only, along with ID6020, ID6021*.		

<sup>341</sup> \* ID6021 is optional, to be decided by the DC

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- (a) Only the minimum required courses with the best performance will be considered for computing
   the CGPA.
- (b) Research scholars shall obtain CGPA  $\geq$  7.5, subject to a minimum of a 'C' grade in each of the prescribed courses.
- (c) Once a course is successfully completed (meaning a grade of C or higher), it cannot be repeated.
- (d) For scholars upgrading from M.S to Ph.D in engineering/management, the courses successfully
   completed during the M.S programme may be considered by the DC towards meeting the
   coursework requirements.
- (e) Those scholars that upgrade from M.S to Ph.D or join the direct M.S+Ph.D programme, and choose to get both the M.S and Ph.D degrees, should complete the following two additional courses (6 credits each) by the 4th semester. Completion of these two courses will be towards the partial fulfillment of the award of the M.S degree. These courses are included in the CGPA, and a minimum grade of 'C' is required. For each of the two courses, scholars have to submit a project report and give a seminar presentation.
- (1) XX6999 Critical review of Literature (where XX is the Department Code).
- (2) XX7999 Simulation, or preliminary experimental/analytical verification of prior art as
   appropriate to the discipline.
- <sup>359</sup> PhD-R.11.3 Grades and CGPA

Based on performance, each scholar is awarded a final grade at the end of the semester in each subject. The grades and the corresponding grade points are as follows:

Grade	S	А	В	С	D	Е	U	
Points	10	9	8	7	6	4	0	_

<sup>363</sup> The CGPA will be calculated according to the formula

$$CGPA = \frac{\sum C \times GP}{\sum C}$$

where C = credits and GP = the grade point obtained for the course. The sum is over the best, minimum number of courses required for the programme.

#### <sup>366</sup> PhD-R.12 CANDIDACY EXAMINATION

<sup>367</sup> The term comprehensive examination is renamed as "Candidacy Examination". 305<sup>th</sup> Senate Res. № 48/2023

The objective of the candidacy examination is to test the breadth of the scholar's knowledge in his/her

discipline and field of research. The candidacy examination must include a research component

A Ph.D scholar must pass the candidacy examination of his/her department within the time frame provided in the following table.

372	S.No	Programme Category	First Attempt Within (months after regis- tration)	-
373	1.	Regular PhD (HTRA, Fellowship, Sponsored, Foreign, etc.)	15	18
	2.	Direct MS + PhD	18	24
	3.	Upgraded PhD (M Tech/MS)	15	18
	4.	Upgraded PhD (MSc)	15	18

#### 374 **305<sup>th</sup> Senate Res. № 48/2023**

- (a) The candidacy examination committee will consist of the DC members and at least two other
   faculty members of the Institute nominated by the Chairperson, DC.
- (b) If the scholar does not appear for the first attempt within the stipulated period, scholar ship will be suspended. The amount will be paid as arrears after clearing the examination.
   305<sup>th</sup> Senate Res. № 48/2023
- (c) For a research scholar from engineering/management who does not pass the candidacy examination after two attempts, his/her enrollment will be suspended from the date of declaration of the result. If (s)he chooses to change the registration from the Ph.D to the MS programme, the request may be approved based on recommendation of the DC. If the DC does not recommend the conversion, the registration will be canceled from the date of declaration of the results of the candidacy examination.
- (d) The departments must publish the details of the modus operandi of the candidacy examination
   so that the scholars and faculty are well aware of the process. 305<sup>th</sup> Senate Res. № 48/2023
- (e) The DC will decide the method of candidacy examination for scholars in the interdisciplinary
   Ph.D program and inform the Dean(AR).

(f) QIP scholars shall pass the candidacy examination within 6 months from the date of joining.
 If a scholar does not pass the candidacy examination in the first attempt, he/she will be allowed another attempt within 6 months of the first. An unsuccessful second attempt will result in a suspension of enrolment. If progress is not satisfactory, his/her enrolment will be suspended from the date of declaration of the result.
 305<sup>th</sup> Senate Res. № 48/2023

### <sup>395</sup> PhD-R.13 Thesis and Panel of Examiners

- <sup>396</sup> The PhD thesis is a detailed report of the scholar's research.
- (a) On satisfactory completion of the prescribed courses, the candidacy examination, the research,
   the two seminars and when the thesis is ready for submission, the scholar requests the thesis submission approval meeting to the Academic Section, through the guide(s) and HoD, for
   consideration of the DC. 295<sup>th</sup> Senate Res. № 09/2022
- (b) Prior to the thesis-submission approval meeting, a PhD scholar is required to have at least one paper published (or accepted for publication) in a refereed journal acceptable to the DC. The content of the publication must be part of the thesis, and the scholar must be the primary contributor of the publication. The DC may recommend exceptional cases that do not meet this requirement, which will then be reported to the IITM Senate. 293<sup>rd</sup> Senate Res. № 37/2021
   295<sup>th</sup> Senate Res. № 09/2022
- At the end of the programme duration, the doctoral committee could permit the student to
  submit his/her thesis provided that a journal paper based on the work (with the scholar being
  the primary contributor) has been submitted. Such cases, which are expected to be rare, will
  be reported to the Senate. Such theses will only be accepted for evaluation under Track A.
  305<sup>th</sup> Senate Res. № 48/2023
- (c) At the thesis-submission approval meeting, the DC and sectional observer will approve the
   thesis and the list of examiners to be used.
- (d) A two-track policy will be followed for thesis evaluation. 295<sup>th</sup> Senate Res. № 09/2022
- a) Track 1: For scholars who have high-quality published work which is more than the norm for the research area. The scholar must be the primary contributor to the papers, and this should be evident in terms of authorship as first author, or equally credited author. The publications must be in good venues. 70% or more of the thesis must have already been published (or accepted) for publication. Track-1 evaluation is by two examiners approved at the thesis-submission approval meeting. The examiners are given six weeks to evaluate the thesis and submit their reports.
- b) Track A: For scholars who have published work which is considered normal for the research area. Track-A evaluation will be by three examiners composed of two external examiners and one internal (IITM) examiner from a list of four external and two internal examiners provided. Dean(AR) picks examiners from the list approved at the thesissubmission approval meeting. The examiners are given six weeks to evaluate the thesis and submit their reports. There is no compulsion to include foreign examiners in the list of external examiners, but at least one must be an Indian examiner.

- Scholars should circulate their thesis, which is ready to be sent out for examination, to their
   DC members and the sectional observer at least a week before the thesis-submission approval
   meeting. For Track 1, the expectation is that the thesis is such that it should be accepted as is,
   or with very minor editorial corrections.
- The guide should identify thesis examiners and get their email concurrence before the thesissubmission approval meeting. The guide can use the thesis abstract, as well as a list of the scholar's published work as inputs to potential examiners to help them decide on accepting to review the thesis.
- The decision to qualify for Track-1 will be made by the sectional observer at the thesissubmission approval meeting, based on the feedback from the doctoral committee. If there is a disagreement, Dean (AR) will decide.
- Notwithstanding the above, the choice of track is left to the guide, with movement from Track-1
  to Track-A being possible, but not vice versa.

#### 442 PhD-R.14 Thesis Reports

- (a) For Track 1, the viva-voce examination can be held as soon as the first report is received.
   For Track A, if two examiners declare the thesis as 'commended', the viva voce exam will be conducted.
- <sup>446</sup> 295<sup>th</sup> Senate Res. № 09/2022
- (b) For Track A, if an examiner recommends that the thesis should be resubmitted after revision,
   the research scholar will be allowed to do so within the time stipulated by the DC, failing which
   the revised thesis will not be accepted and his/her registration will be canceled.
- (c) For Track A, if one of the external examiners evaluates the thesis as 'not acceptable', the thesis
   shall be referred to a third external examiner from the evaluation panel.
- (d) For Track A, if two examiners, after referral to a third examiner if necessary, evaluate the thesis
   as 'not acceptable', the thesis will not be accepted and the registration of the scholar will be canceled.
- (e) In all other cases not covered by the above regulations, the matter will be referred to the DC for consideration.

#### 457 PhD-R.15 Viva Voce Examination

459

<sup>458</sup> The viva voce exam board consists of the following members: 295<sup>th</sup> Senate Res. № 09/2022

	Chairperson, DC	Chair
460	The thesis examiner(s) who have sent in their evaluation reports.	Members(s)
	Guide(s)	Member(s)

• DC members will be invitees to the viva-voce examination.

- The viva-voce should be held in an online/hybrid mode, so that no travel is involved.
- (a) If the thesis is recommended for acceptance at the end of the viva-voce examination, the
   Chairperson of the viva-voce board shall forward the thesis to the Academic Section certifying
   that the revisions recommended by the board, if any, have been incorporated in the thesis.
- (b) If the viva voce examination board evaluates the performance of the scholar as not satisfactory,
   the scholar shall reappear for the examination, not earlier than one month but not later than six
   months from the date of the first examination.
- (c) For the second viva-voce examination, the board will also include the members of the DC. If
   the performance of the research scholar is still not satisfactory, the matter will be referred to
   the Senate for a decision.
- (d) The examiners' names can be appended in the final thesis only with their consent.

#### 473 PhD-R.16 MINIMUM AND MAXIMUM DURATION

The minimum and maximum duration of the Ph.D programme from the date of registration to the date of submission of thesis for full-time research scholars are the following:

<sup>76</sup>					
	Mode	Discipline	Qualifying Degree	Minimum	Maximum*
_		Enginaaring	M.Tech/ME/M.S	2 years	5 years
		Engineering	M.Sc	3 years	5 years
	Regular Ph.D —	Sciences, Humanities,	Master's degree	2 years	5 years
		Management	-	-	
-	Direct M.S + Ph.D		B.E/B.Tech/B.S	3 years	6 years
-			M.Tech/M.S	3 years	6 years
	Upgraded Ph.D		M.Sc	3 years	5 years + time taken from M.Sc admission to upgradation+

\* The DC may grant an extension of 2 more years to submit the thesis. An additional year may be allowed for scholars in the QIP, external, part-time and staff categories.

+ 279<sup>th</sup> Senate Res. № 6/2018

The minimum residential requirement for the scholars admitted under the external or part-time
categories is one semester. Such scholars will be permitted to complete the residential requirement
in multiple sessions, if they choose to take IITM web-based courses for completing their coursework.
281st Senate Res. № 72/2018 This requirement is waived for external scholars who are employed in

482 the IITM Research Park.

The registration period of the programme will be extended by the duration of the sanctioned maternity leave (up to a maximum period of 180 days). The period of medical leave, duly certified by the Institute Hospital, can be considered by Dean(AR) to extend the registration period of the programme,
 up to a maximum period of one year. 282<sup>nd</sup> Senate Res. № 101/2018

#### <sup>487</sup> PhD-R.17 Relief from the Ph.D Programme to take up Employment

<sup>488</sup> Scholars who have a job offer can obtain relief from the programme upon recommendation by the <sup>489</sup> DC, if they have completed the minimum residential requirement (as per PhD-R.16), coursework, <sup>490</sup> the candidacy examination and the research proposal seminar.

The scholar should keep his/her registration alive by paying the requisite fee every semester. Renewal of the registration each semester is subject to the DC finding the scholar's progress satisfactory.

#### 493 PhD-R.18 Temporary Withdrawal from the Programme

A scholar may be permitted by the Dean(AR) to withdraw from the programme for a period not longer than a semester for health reasons or any other valid grounds, if recommended by the DC. The maximum time permitted for temporary withdrawal from the programme is for a period of one year, which may be taken continuously with the reapproval by the DC.

#### 498 PhD-R.19 CANCELLATION OF REGISTRATION

The registration of a research scholar who has not enrolled, or whose progress is not found to be satisfactory by the DC is liable to be canceled. The registration of a research scholar, who has not submitted his/her thesis before the end of the maximum permissible period (PhD-R.16), will be canceled.

<sup>503</sup> After cancellation of registration, the Institute reserves the right to allow re-registration on a case-<sup>504</sup> by-case basis.

At the end of the duration of the program, the scholar (in consultation with the guide) will give the doctoral committee a plan and timeline for thesis submission. The doctoral committee will deliberate and grant upto a maximum of three years from the date of cancellation of registration to submit the thesis, beyond which registration will not be reinstated under any circumstance. 306<sup>th</sup> Senate Res. Nº 06/2024

#### <sup>510</sup> PhD-R.20 Reversion of Upgraded Ph.D to Master's Programmes

#### 511 PhD-R.20.1 Reversion of scholars upgraded from M.S to Ph.D

- (a) A scholar may revert to the M.S programme after one semester from the date of upgradation
   if (s)he has completed two and half years from the date of registration of the M.S programme.
   The DC may recommend reversion of registration for approval by the Senate.
- (b) If the scholar does not pass the candidacy examination in two attempts, (s)he will revert to the
   M.S programme.
- (c) The DC will consider the application only if the scholar has completed all the course requirements prescribed originally by the GTC when the scholar registered for the M.S programme and if the research to date is found suitable for submission as an M.S thesis. The DC may recommend reversion of registration for approval by the Senate. The DC will continue to function as the GTC till the completion of the M.S requirements. The scholar must complete

- the M.S degree requirements (see M.S Ordinances & Regulations) within one year from the date of reversion.
- (d) Under exceptional circumstances, the DC may recommend cases of the regular Ph.D. scholars
   who passed the candidacy examination for conversion to M.S. In such cases, the DC should send
   a detailed justification of the circumstances and a strong recommendation for Dean (AR)'s con sideration. This provision is only expected to be used very sparingly, after every possible avenue
   to complete the requirements of the PhD research is explored.

#### <sup>529</sup> PhD-R.20.2 Reversion of scholars upgraded from M.Tech to Ph.D

- (a) A scholar may apply for revert to the M.Tech programme after one semester from the date
   of upgradation if (s)he has completed three years after the date of registration for the M.Tech
   programme. The DC may recommend reversion of registration for approval by the Senate.
- (b) A scholar who does not pass the candidacy examination in two attempts will revert to the
   M.Tech programme. If the Senate approves the reversion upon recommendation by the DC,
   the scholar must complete the requirements of the M.Tech programme (see M.Tech. Ordinances
   & Regulations) within one year from the date of reversion.
- (c) An M.Tech + Ph.D dual-degree scholar of Engineering Design may be permitted to exit with
   an M.Tech degree if (s)he does not pass the candidacy exam twice, provided (s)he satisfactorily
   completes the required number of courses, and submits an acceptable M.Tech project report.
- (d) Under exceptional circumstances, the DC may recommend cases of the regular Ph.D. scholars who passed the candidacy examination for conversion to M.Tech. In such cases, the DC should send a detailed justification of the circumstances and a strong recommendation for Dean (AR)'s consideration. This provision is only expected to be used very sparingly, after every possible avenue to complete the requirements of the PhD research is explored.
   298<sup>th</sup> Senate Res. № 44/2022

#### PhD-R.20.3 Reversion of scholars upgraded from M.Sc to Ph.D

- (a) A scholar may revert to the M.Sc programme after the sixth semester. The DC may recommend
   reversion of registration for approval by the Senate.
- (b) A scholar who does not pass the candidacy examination in two attempts will be revert to the
   M.Sc programme. The scholar must complete the M.Sc. degree requirements (See M.Sc.
   Ordinances & Regulations) within one year from the date of reversion.
- (c) Under exceptional circumstances, the DC may recommend cases of the regular Ph.D. scholars who passed the candidacy examination for conversion to M.Sc. In such cases, the DC should send a detailed justification of the circumstances and a strong recommendation for Dean (AR)'s consideration. This provision is only expected to be used very sparingly, after every possible avenue to complete the requirements of the PhD research is explored.
   298<sup>th</sup> Senate Res. № 44/2022

### <sup>558</sup> PhD-R.21 Conversion of Regular/Direct M.S + Ph.D Registration to <sup>559</sup> THE M.S PROGRAMME

A direct M.S + Ph.D scholar can apply for conversion to the M.S programme, if (s)he fulfills all M.S admission criteria for the corresponding year of selection, subject to the recommendation of the DC.

<sup>562</sup> This option is not available for regular Ph.D scholars.

A direct-PhD scholar who did not fulfill the M.S admission criteria for the corresponding year of selection can revert to the M.S. programme only after 3 years from the date of admission. 298<sup>th</sup> Senate Res. № 44/2022

<sup>566</sup> A regular/direct M.S + Ph.D scholar in Engineering/Management who does not pass the candidacy <sup>567</sup> examination in two attempts may request the DC to convert his/her registration from the Ph.D to the <sup>568</sup> M.S programme. If this option is not exercised, his/her registration will be canceled. The DC may <sup>569</sup> recommend conversion of registration for approval by the Senate.

- <sup>570</sup> (a) The DC will continue to function as the GTC till the completion of the M.S requirements.
- (b) The duration of the scholar's M.S program shall not be more than 3 years from the date of registration in the Ph.D programme.
- (c) In its first meeting following the conversion of registration, the GTC may prescribe any
   additional courses necessary to satisfy the requirements of the M.S programme.
- <sup>575</sup> (d) The award of HTRA to the scholar will be as per the M.S programme.

(e) Under exceptional circumstances, the DC may recommend cases of the regular Ph.D. scholars
 who passed the candidacy examination for conversion to M.S. Program. In such cases, the
 DC should send a detailed justification of the circumstances and a strong recommendation
 for Dean (AR)'s consideration. This provision is only expected to be used very sparingly,
 after every possible avenue to complete the requirements of the PhD research is explored.
 298<sup>th</sup> Senate Res. № 44/2022

#### <sup>582</sup> PhD-R.22 Award of the Ph.D Degree

<sup>583</sup> Upon satisfactory performance in the viva-voce examination and the submission of the final thesis, <sup>584</sup> the scholar will be awarded a Ph.D degree on the recommendation of the Senate, and with the <sup>585</sup> approval of the Board of Governors of IITM. The effective date of the degree shall be the date of the <sup>586</sup> meeting of the BoG. 279<sup>th</sup> Senate

The award of Ph.D degrees before the convocation will be considered on request, provided the scholars have completed all the requirements.

<sup>589</sup> Direct M.S+Ph.D and Ph.D scholars who have upgraded from the M.S programme will be awarded <sup>590</sup> the M.S and Ph.D degrees after successfully completing all the requirements. The name of the M.S <sup>591</sup> degree under this option will be "Master of Science" in YY (name of the department). Ph.D scholars

who have upgraded from M.Tech/M.Sc will be awarded the MTech/M.Sc and Ph.D degrees after successfully completing all the requirements.

#### 594 PhD-R.23 DISCIPLINE

<sup>595</sup> Every scholar is required to observe disciplined and decorous behavior both inside and outside the <sup>596</sup> campus and should not indulge in any activity, which will bring down the prestige of IITM.

Any act of indiscipline of a scholar reported to the Dean(AR) will be referred to a Discipline and Welfare Committee nominated by the Senate. The committee will investigate and recommend suitable punishment if it finds the charges substantiated. The recommendation of the committee will be considered by the Board of Academic Research, which will authorize the Dean(AR) to take appropriate action. The Dean(AR) will report the action taken at the next meeting of the Senate.

<sup>602</sup> **Appeal:** The scholar may appeal to the Chairperson, Senate whose decision will be final.

#### 603 PhD-R.24 Power to Modify

Notwithstanding all that has been stated above, the Senate reserves the right to modify any of the above regulations.