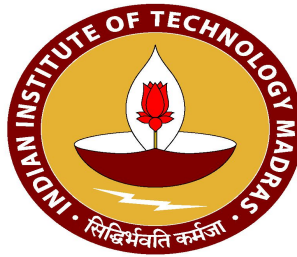


Ph.D. / M.S.  
ORDINANCES  
AND  
REGULATIONS



INDIAN INSTITUTE OF TECHNOLOGY MADRAS  
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# CONTENTS

## Ph.D. ORDINANCES

### Ph.D. REGULATIONS

- R.1 Categories of Admission
- R.2 Eligibility
- R.3 International Students
- R.4 Selection Procedure
- R.5 Admission
- R.6 Choice of Guide
- R.7 Eligibility for being Guides
- R.8 Change/Addition of Guide
- R.9 Doctoral Committee
- R.10 Registration
- R.11 Course Work
- R.12 Progress Report
- R.13 Comprehensive Examination
- R.14 Enrolment
- R.15 Minimum Residential Requirement
- R.16 Relief from Ph.D. Programme to take up job
- R.17 Maximum duration of Programme
- R.18 Withdrawal from the Programme
- R.19 Cancellation of Registration
- R.20 Reversion of upgraded Ph.D. Registration to Master's programme
- R.21 Conversion of Ph.D. Registration to MS Programme
- R.22 Synopsis
- R.23 Submission of Thesis
- R.24 Panel of Examiners
- R.25 Thesis Report
- R.26 Viva Voce Examination
- R.27 Award of Ph.D. Degree
- R.27 Discipline
- R.29 Power to Modify

## **M.S. ORDINANCES**

### M.S. REGULATIONS

- R.1 Categories of Admission
- R.2 Eligibility
- R.3 International Students
- R.4 Selection Procedure
- R.5 Admission
- R.6 Choice of Guide
- R.7 Eligibility for being Guides
- R.8 Change/Addition of Guide
- R.9 General Test Committee
- R.10 Registration
- R.11 Course Work
- R.12 Progress Report
- R.13 Enrolment
- R.14 Minimum Residential Requirement
- R.15 Relief from M.S. Programme to take up job
- R.16 Maximum Duration of Programme
- R.17 Withdrawal from the Programme
- R.18 Cancellation of Registration
- R.19 Reversion of updated Ph.D. Registration to M.S Programme
- R.20 Conversion of PhD registration to MS programme
- R.21 Synopsis
- R.22 Submission
- R.23 Panel of Examiners
- R.24 Thesis Report
- R.25 Viva Voce Examination
- R.26 Award of M.S. Degree
- R.27 Discipline
- R.28 Power to Modify

# ORDINANCES AND REGULATIONS

## ORDINANCES

- O.1 A candidate who has qualified for the award of Master's degree of this Institute or a recognised Institute or University in the discipline as prescribed in the regulations of the Senate is eligible to apply for the Ph.D. programme of this Institute.
- O.2 A candidate who has qualified for the award of Bachelor's Degree in Engineering / Technology with exceptionally good academic background in the discipline as prescribed in the regulations of the Senate is also eligible to apply for Ph.D programme in Engineering/Technology of this Institute.
- O.3 The award of the Ph.D degree shall be in accordance with the regulations of the Senate of this Institute.

## REGULATIONS

### R.1 Categories of Admission

Candidates will be admitted to the Ph.D programme of the Institute under one of the following categories:

- (a) Regular full-time scholars with or without Institute fellowship or with project support.

*Admission to Ph.D Programmes under Regular as well as the Project category, the Departments must adopt a common cut off at the time of calling for interview and common merit list of selection for all categories.*

Students selected from HTRA list can move to N-HTRA and revert back to HTRA later. Students selected from N-HTRA list cannot move to HTRA category

- (b) Research scholars sponsored under the Quality Improvement Programme (QIP).
- (c) Research scholars who are staff members of the institute.
- (d) Research scholars under the external registration programme sponsored by and employed in industry/orgainsation having R & D facilities and recognised by DST or IIT Madras, national

laboratories, reputed universities/colleges or employed in research/analysis jobs in public sector/private sector/ government in the case of management area.

*(A research scholar under the external registration programme will normally carry out part or all of his / her research work in the industry/ organization/national laboratories/universities employing the scholar under the supervision of a co-guide also employed in the same organization and a guide at IIT Madras.*

*The candidate must have at least two years experience in the case of registration in Engineering/Sciences/Social Sciences and in Management).*

- (e) Research scholars working on a part-time basis from a reputed University / Institution / Organisation.

(A research scholar working on a part time basis shall normally carry out the research work at IIT Madras under the supervision of a guide at IIT Madras. The feasibility of doing this with sufficient intensity will be an important consideration in admitting the scholar in this category.

**The candidate must have at least two years experience in the case of registration in Engineering/Sciences/Social Sciences and in Management).**

- (f) Scholars will be permitted to do course work without the residential requirement with the permission of their institution subject to fulfilling the course requirement.
  - i) Part time scholar residing within the commutable distance from IIT Madras may use this option.
  - ii) The scholar to complete the course and comprehensive requirement within the time limit.
  - iii) Leave not required for attending the courses.

#### (f) **Inter-disciplinary MS/PhD**

- a. The faculty member interested in guiding Inter-disciplinary Research has to prepare the area of research and eligibility criteria and send to Academic Section by January end for the February advertisement and August end for October advertisement. *(PI refer MS PhD admission brochure for details of area of research)*
- b. The DC of the scholar will decide the course requirement.

- c. DC will decide about the method of Comprehensive Examination.

## **R.2 Eligibility**

### **R.2.1 Minimum Educational Qualifications**

Qualification for Regular Full-Time Research

The minimum educational qualifications for admission to the Ph.D programme of the Institute are as follows:

#### **2.1.1 Ph.D. in Engineering**

- (a) Candidates with a Master's degree in Engineering/Technology with a good academic record or a Master's degree by Research in Engineering/ Technology disciplines, with a good academic record.
- (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline and with a valid GATE score or UGC/CSIR-NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration. In the case of candidates with more than 5 years relevant experience after the Master's degree, the requirement of a test score may be waived by the Selection Committee.
- (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission to Ph.D. Programme as a regular full time scholar subject to the following conditions:
- a B.Tech. degree holder of Centrally Funded Technical Institute with a minimum CGPA of 8.0 on a 10.0 point scale or with a valid GATE score
  - a Bachelor's degree holder in Engineering/Technology with 8 CGPA or equivalent from any other University and having a valid GATE score.

- a Bachelor's degree holder in Engineering/Technology from a reputed R & D organization and having a proven research record.

*Final selection for admission will be as per the criteria fixed by the department selection committee.*

### **2.1.2 Ph.D. In Sciences**

Master's degree in Sciences with a good academic record and having a valid GATE score or UGC/CSIR-NET/NBHM or equivalent qualification tenable for the current year in the relevant area. Master's degree in Engineering/Technology are eligible with a good academic record. B.Tech degree holder of an IIT are eligible with a minimum of CGPA of 8.0 on a 10.0 point scale or with a valid GATE Score.

B.Tech / B.E degree of any recognized University in India with a minimum CGPA of 8.0 on a 10.0 point scale or equivalent with valid GATE score.

Students who get more than 8.0 CGPA in M.Sc. in Science Departments of IIT Madras can be admitted directly to their Ph.D programme in Sciences with interview at departmental level.

### **2.1.3 Ph.D. in Humanities and Social Sciences**

Master's degree in an eligible discipline with a good academic record or equivalent and having a valid GATE score or UGC/CSIR-NET/NBHM or equivalent qualification tenable for the current year in the relevant area.

### **2.1.4 Ph.D. in Management**

Masters degree or equivalent PG Diploma or Associateship in a relevant discipline, and a Bachelor's degree with a good academic record OR Five year integrated masters degree / dual degree or equivalent in a relevant discipline with a good academic record

AND

Qualifying in national level examinations such as JMET /CAT /XAT /MAT /ATMA /GATE /UGC or CSIR / NET / JRF or Lectureship or equivalent or international level post graduate admission examination such as GMAT / GRE or equivalent.

OR

At least 5 years of managerial experience in lieu of the above examination. (This clause is only for Non-HTRA candidates)

Master's degree in Engineering / Technology with a good academic record or a Master's degree by Research in Engineering / Technology in a relevant discipline are exempted from qualifying in National level examinations.

### **2.1.5 Institute staff members/Research scholars under QIP/Research Scholars under External Registration / Research scholars working on part-time basis.**

For Research Scholars in the above categories, the minimum educational qualifications are the same as prescribed for full time research Scholars in 2.1.1, 2.1.2, 2.1.3 and 2.1.4 for admission to the Ph.D programme in the respective categories. However, valid GATE score or CSIR / UGC JRF or Lectureship / NBHM / JMET / CAT / AIMA or equivalent qualification as applicable for regular full time research scholars may not be required in these cases.

The research scholars may be admitted to the Ph.D programme under the part-time category from a reputed University/ Institution/ Organization and they must have **two years** experience for Ph.D in the case of registration in Engineering / Science / Social Sciences / Management Studies.

(The list of eligible disciplines in which the minimum educational qualifications have to be obtained will be provided by each department in the Admissions Brochure, which will be updated from time to time.

The Department/Selection Committee may find fit to consider meritorious candidates from disciplines other than listed in the Admission Brochure if there is a good match between the educational / research background of the candidate and the proposed area of research.

The admission brochure will also include details about inter-disciplinary research areas, which may be pursued by the research scholars for the Ph.D degree and the corresponding eligible disciplines given by the Departments.

Additional and stiffer criteria than the minimum educational qualifications given in R.2.1 may be set by the Department Selection Committee from time to time for short listing candidates to be called for interview and or test.)



## **R.2.2 Upgradation of registration from M.S / M.Tech. to Ph.D. Programme (Regular / External)**

Meritorious candidates who have registered for M.S/M.Tech. programmes are eligible to upgrade their registration to the Ph.D programme in the same department if they satisfy the following criteria:

- (a) The candidate should have been registered for a minimum of 2 semesters in the M.S/M.Tech. programme.
- (b) Minimum CGPA of 8.0 in the prescribed courses.
- (c) Course work is compulsory and DC can suitably recommend residential requirement to complete course work.

In the case of a M.S. Scholar, the General Test Committee of the M.S. scholar will consider the application for upgradation to Ph.D. under the supervision of the same guide(s) and make its recommendation to the Chairman, Senate to approve the upgradation of the scholar as per rule and report the same to the Senate. If approved, a Doctoral Committee as per R.9 will be constituted to replace the General Test Committee.

In the case of a M.Tech. Student, a Committee duly constituted by the Head of the Department will consider the application for upgradation to Ph.D. and make its recommendation to the Chairman, Senate to approve the upgradation of the student as per rule and report the same to the Senate. If approved, a Doctoral Committee as per R.9 will be constituted and guide(s) as per R.6 will be allotted.

The candidate should pass the comprehensive examination (R.13) within a semester after upgradation to the Ph.D. programme and within two attempts.

The candidate will be treated on par with one admitted directly after a Bachelor's degree, but with the residency period and course work completed under the M.S/M.Tech. registration as decided by the Doctoral Committee credited to the Ph.D programme.

(see Page 10 for explanation of CGPA)

### R.2.3 switch over to Ph.D. from M.Tech. programme (**Kakodkar Committee Recommendation**)

- (i) For students admitted from M.Tech to Ph.D, an option may be given to them to select 2 degrees for M.Tech. and Ph.D. or Ph.D alone. Students who exercise two-degree option to complete four additional courses above 5000 level.
- (ii) The minimum CGPA for eligibility shall be fixed at 8.
- (iii) The Departmental Committee consisting HoD will recommend for up-gradation from M.Tech. to Ph.D.
- (iv) If the student opts for two degrees, no separate project works to be done for M.Tech. programme.
- (v) They may be allowed to take up Ph.D. in another department also as recommended by the departmental committee.
- (vi) However, M.Tech. Degree will be given from the parent department.
- (vii) Exit option may be given to go back to the parent department, if dropping out of Ph.D.
- (viii) Admission norms of the each department will be fixed by the committee of the admitting department.

### **R.3 International Students**

Foreign nationals can only register as regular full-time scholars. Foreign nationals with degree from Indian Universities will be treated on par with Indian nationals for admission purposes. Foreign nationals with foreign degrees must meet the minimum educational requirements as given in **R.2.1** equivalent to a Indian Master's degree in the relevant disciplines. **In addition, they should have a valid GRE/ GMAT / GATE /JMET/CAT/XAT/MAT/ATMA/UGC or CSIR /NET /JRF or an equivalent examination and should have cleared TOEFL score in the relevant discipline.** International students are expected to have a working knowledge of English.

#### **R.4 Selection Procedure**

Eligible candidates possessing the minimum educational qualifications and satisfying additional criteria set by the departments from time to time, will be called for an Interview and/or Test by the Selection Committees of the respective departments.

For candidates who have obtained PG degree 10 years earlier as on the last date prescribed for receipt of the completed application, a departmental test may be conducted.

The applications of foreign nationals may be considered without a personal interview / test.

Based on the academic record and the performance of the candidates in the interview and/or test, the Departmental Selection Committee will recommend to the Chairman, Senate the names of candidates found suitable for admission to the Ph.D. Programme.

#### **R.5 Admission**

- (a) Candidates whose selection is approved by the Chairman, Senate will be admitted to the Ph.D. programme after payment of prescribed fees.
- (b) Ordinarily, a candidate is not eligible for re-registration for Ph.D. after cancellation of his/her earlier registration for any reason. Based on the merits of the individual case and taking into consideration of any special circumstances, a candidate may be considered for re-registration.

#### **R.6 Choice of guide**

- (a) Allotment of research scholars to guides will be made by the Head of the Department taking into consideration the research profile of the department and the preferences of the research scholars and guides.
- (b) There shall be not more than two guides from the Institute for a research scholar.

- (c) Additional Guide from outside the Institute can be allowed with the approval of Chairman, Senate on case to case basis only for Biomedical Devices and Technology Programme.
- (d) Co-guide from other IITs / Institutions / Industries with a minimum academic qualification of Master's degree in Engineering / Management and with adequate professional experience in the relevant field or Ph.D in relevant area may be nominated for Ph.D scholars on the request of scholar / supervisor.
- (e) The recommendation for the co-guide shall be made with valid reasons and justifications by the DC of the research scholar.
- (f) Appointment of Co-guide by the Head of the Department on the recommendation of the guide within 24 months from the date of joining for the Ph.D. scholars. After the time limit, the co-guide shall be made with valid reasons and justifications by the DC of the research scholar.
- (g) Every department should send the method of guide allocation passed by their DCC to Dean (Academic Research) for approval. The procedure should be made known to faculty and students.

## **R.7 Eligibility for being guides**

The following may be a guide for a Ph.D scholar:

- All faculty members of the Institute.
  - Scientific / Design staff of the Institute with a doctoral degree.
  - Continuance of retired faculty members / emeritus faculty as guides
- (a) When a faculty member, who has guided a candidate for at least 3 years, retires, he will continue to be a guide. However, a co-guide who is in service will be appointed in addition. The guide who has retired will be invited for the Doctoral Committee meetings, synopsis meeting and the viva voce examination.
  - (b) A faculty member who is to retire within 3 years may be permitted to become a guide to a new scholar with another faculty member, who is not likely to retire within 5 years as co-guide, at the time of registration itself. On retirement, the faculty member will continue to be a guide and will be invited to the Doctoral Committee meetings, synopsis meeting and viva voce examination.

- (c) CSIR and other Emeritus Fellows / Scientists / Emeritus Professors, who hold office at this Institute for a period of 2 years or more, can become co-guides for scholars along with a guide from IIT Madras, with at least 5 years service still left at the time of registration of the scholar.
- (d) In case a faculty member who is a guide goes on leave exceeding one year duration, another faculty member will be identified to become a co-guide of the research scholar.
- (e) The induction of new guides after 3 years of registration of a research scholar will be considered by the Doctoral Committee in the office of the Dean, Academic Research.

### **R.8 Change/Addition of guide**

The Doctoral Committee of a research scholar may recommend change of guide or appointment of a co-guide for valid reasons.

### **R.9 Doctoral Committee**

The Head of the Department 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, within 8 weeks of the date of joining of the research scholar.

The following is the composition of the Doctoral Committee:

1. Head of the Department (HoD/nominee of HoD) (If the HoD happens to be the Guide of a scholar, the senior most Professor / previous HoD will be nominated by Chairman, Senate or his nominee) - Chairman  
 HoD may nominate Chairman, if he/she is otherwise engaged for the conduct of DC/GTC meetings to assess the progress of the scholars  
 HoD must be present for comprehensive Exam / Synopsis / Thesis report / Viva voce meetings of the Scholar
2. The Dean (Academic Research) - Member
3. Research Guide or Guides - Member(s)
4. A minimum of **two faculty member** of the Department nominated by the Chairman, Senate or his nominee from the suggested panel of names by HoD - Member

5. A minimum of one faculty member of allied - Member Departments or allied Institutions nominated by the Chairman, Senate or his nominee from the suggested panel of names by HoD

In case any member goes on leave exceeding one year duration, or resigns or retires from the Institute, the Chairman, Senate or his nominee will nominate another member on the suggestion of the Chairman, Doctoral Committee.

Scientific/Design staff and others who are eligible to guide Ph.D. scholars may be nominated as members of the Doctoral Committee.

- (a) For comprehensive viva meeting HoD or his/her nominee to be the Chairman
- (b) Guide will act as a convener of the Doctoral Committee except for comprehensive viva
- (c) The workflow will show the details of DC meeting conducted and DC commitment of faculty members.

#### **R.10 Registration**

- (a) The Doctoral Committee will meet normally within a month of being constituted, where the research scholar will make a presentation. The Doctoral Committee will fix/approve the date of registration for the Ph.D. programme, consider the proposed research topic and prescribe/approve the courses of study in this meeting.
- (b) The registration may be backdated for research scholars employed in IC & SR projects by up to 6 months from the date of admission to the programme, on the recommendation of the Doctoral Committee with justification. Based on the recommendation of the Doctoral Committee, the Senate may, additionally permit backdating by a further period of 6 months.

#### **R.11 Course Work**

The Doctoral Committee will normally prescribe two core courses and at least four electives. The prescribed courses shall be post-graduate level courses of the Institute.

- (a) Ph.D research scholars in the Engineering/Sciences/ Humanities and Social Sciences/Management shall complete two core courses and at least two electives [ **minimum 12 credits (Resolution.20, 210<sup>th</sup> Senate)**]. In cases where the scholar is directly admitted to the Ph.D Programme in Engineering with a Bachelor's degree in Engineering/ Technology or with a Master's degree in science where eligible or where the research scholar updates from the M.S/M.Tech programme at IIT Madras, to the Ph.D programme, the scholar should successfully complete 5 core courses and 3 electives out of a minimum 5 prescribed by the Doctoral Committee [**minimum 24 credits (Resolution.20, 210<sup>th</sup> Senate)**].

In the case of a scholar updating to the Ph.D Programme in Engineering from the M.S/M.Tech Programme at IIT Madras, the courses already successfully completed by the scholar in the Master's Programme may be considered by the Doctoral Committee for the course work requirements. Changes in prescribed courses shall be made only by the Doctoral Committee. The Doctoral Committee may prescribe additional courses for a scholar wherever found necessary.

- (b) The Doctoral Committee may give credit to courses already undergone by a research scholar in this Institute or other Institutions, provided they are the same or equivalent to those prescribed, and the performance level of the scholar in them meets the minimum requirements. The Doctoral Committee may prescribe additional courses for research scholars wherever found necessary.
- (c) UG courses suggested by DC may be allowed as additional courses. Credit to courses already undergone by a Research Scholar in this Institute or other Institutions may not be considered if they were credited for award of any previous degree/diploma

(c) **Grades**

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

<b>Grade</b>	<b>Points</b>
S	10
A	9
B	8
C	7
D	6

Research scholars shall obtain a minimum CGPA of 7.5 in the courses taken by them subject to a minimum of “C” grade in the prescribed courses. If more than the minimum required electives have been taken, only the electives with the best performance will be considered for computing the CGPA.

A student is considered to have completed a subject successfully and earned the credits if he secures a grade other than D. Once a subject successfully completed, it cannot be repeated.

The GPA will be calculated according to the formula

$$\text{GPA} = \frac{\sum (C \times GP)}{\sum C}$$

Where C = credit for the course, GP = the grade point obtained for the registered course, the sum is over all the courses taken in that semester, successfully completed courses.

## **R.12 Progress Report**

- (a) A registered research scholar shall submit a written report in the required format, annually for the first three years, and every six months thereafter.

Scholars to submit progress report through workflow to the Guide, HoD, DC members & Office of the Dean (Academic Research) every semester. After guide’s review/evaluation of the progress, HoD to approve the same and the scholar becomes eligible for enrolment.

- (b) The progress made by a research scholar shall be reviewed by the Doctoral Committee once a year for the first 3 years and every six months thereafter.

Continuance of registration and award/continuance of scholarship/Research Assistantship will be based on the recommendation of the Doctoral Committee.

In the case of research scholars under external registration or working on a part-time basis, the Doctoral Committee will pay particular attention to the quantum of effort put in by the scholar towards doctoral studies and progress.

Inadequacy of effort/progress can be a reason for cancellation of registration.



### **R.13 Comprehensive Examination**

- (a) Every Ph.D scholar shall take and perform satisfactorily in a Comprehensive Examination in his/her Department.

The Comprehensive Examination shall be conducted by a Comprehensive Examination Committee of the Department, consisting of the Doctoral Committee members of the scholar and at least two other faculty members of the Institute nominated by the Chairman of Doctoral Committee.

- (b) If the performance of a research scholar in the Comprehensive Examination in the first attempt is not satisfactory, he/she will be given one more opportunity to appear for the comprehensive examination within six months of the first attempt.

The registration of a research scholar who fails to complete successfully the Comprehensive Examination in both attempts, will be given an option to convert his/her registration from Ph.D to M.S. programme if he/she so desired, otherwise his/her registration will be cancelled. The procedure for Ph.D scholars of Engineering / Management Department to convert to MS after failing in the second attempt of Comprehensive Examination is given in R.21/ Ph.D

- (c) The objective of the Comprehensive Examination is to test the general capability of the research scholar and the breadth of his/her knowledge in his/her discipline and areas related to his/her field of research.

The Comprehensive Examination will usually consist of a written test and oral examination or a oral examination.

The Comprehensive Examination Committee shall intimate to the research scholar sufficiently in advance the scope of the Comprehensive Examination, so as to enable the scholar to prepare adequately for it.

- (d) The Ph.D research scholars are normally expected to complete successfully the Comprehensive Examination within a year after his/her registration in the Ph.D programme and in any case not later than three semesters after his registration in the Ph.D programme.
- (e) After successful completion of comprehensive examination, ResearchProposal meeting shall be conducted within a year in the

form of 1<sup>st</sup> seminar. In case seminar is not conducted within 2½ years, there must be a separate research proposal meeting of the DC.

- (f) both written and oral components for Comprehensive viva. The department to decide the modalities.

#### **R.14 Enrolment**

All research scholars who are in residence and whose registration is still in force, are required to enroll online each semester on the stipulated date till their submission of thesis after payment of the requisite fees and HoD to approve it.

Those not in residences may pre-enrol in absentia during the stipulated period after payment of the requisite fees.

The enrolment will be completed only after successful completion of progress meeting during the semester.

The enrolment will be cancelled if the progress is not satisfactory.

Online enrolment through workflow and HoD to approve it.

#### **R.15 Minimum Residential Requirement**

- (a) The minimum period of study and research for regular full time research scholars required at the Institute from the date of registration for the Ph.D. Programme in engineering to the date of submission of Ph.D. thesis shall be 24 months for research scholars with Master's Degree in Engineering / Technology; 36 months for
- i. research scholars with Master's Degree in Sciences,
  - ii. research scholars directly admitted to the Ph.D Programme with Bachelor's degree in Engineering / Technology
  - iii. for research scholars who update from the M.S/M.Tech Programme at IIT Madras to the Ph.D Programme.
- (b) The minimum period of study and research for regular full time research scholars from the date of registration for the Ph.D Programme in Sciences, Humanities and Social Sciences and Management to the date of submission of the Ph.D thesis shall be 24 months.

- (c) The minimum residential requirement for the Ph.D. Scholar under external registration and research scholars working on a part-time basis not employed in the Institute is one semester.
- (d) Withdrawal from the programme is permitted for a semester or longer for reasons of ill health or other valid grounds as duly recommended by Doctoral Committee.

### **R.16 Relief from Ph.D. programme to take up job**

Ph.D. Scholars who got a job offer can get relief from the programme, while keeping their registration alive on payment of the requisite fees every semester, on the following condition :

Scholars who take up jobs will be relieved on their request, based on the recommendations of Doctoral Committee, if they have completed their

- (a) minimum residential requirement;
- (b) course work and
- (c) comprehensive examination.

The renewal of their registration for every year/semester however, will be considered only if the Doctoral Committee finds his/her progress to be satisfactory and recommends continuance of registration.

### **R.17 Maximum Duration of Programme**

Ph.D. Research Scholars should submit the thesis within 5 years from the date of registration. The Doctoral Committee may extend the period of submission of the thesis further 2 years for regular full time research scholars with an additional year for

- (i) research scholars under QIP,
- (ii) research scholars who are staff members of the institute,
- (iii) research scholars under external registration and
- (iv) research scholars working on a part-time basis

### **R.18 Withdrawal from the programme**

A scholar may be permitted by the Dean, Academic Research to withdraw from the programme for a semester or longer for reasons of ill health or other valid grounds duly recommended by the Doctoral Committee. Normally a scholar will be permitted to discontinue from the programme only for a maximum continuous period of two semesters.

## **R.19 Cancellation of Registration**

- (a) The registration of a research scholar whose progress is not found to be satisfactory by the Doctoral Committee or who has not enrolled 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 as in R.17 will be cancelled.

## **R.20 Reversion of updated Ph.D Registration to Master's Programmes**

- (a) i) A research scholar who updates his/her M.S. registration to Ph.D, may apply for reversion to the M.S. Programme under the supervision of the same guide(s) if he/she so desires and if he/she has completed three years after the date of original M.S registration.
- (ii) If a research scholar, who updates his/her M.S. registration to Ph.D, fails to pass the comprehensive examination in two attempts, he/she will be reverted to the M.S. Programme.

The Doctoral Committee will consider the application only if the scholar has completed all the course requirements prescribed originally by the General Test Committee when the scholar registered for the M.S. programme and if the research work carried out till date is found suitable for submission as an M.S. thesis. If the application is found acceptable, the Doctoral Committee may recommend reversion of registration. If the reversion is approved by the Institute, the Doctoral Committee will continue to function as the General Test Committee till the completion of the scholar's M.S. Programme.

The scholar must complete the requirements of the M.S. degree within a maximum period of one year from the date of reversion of the registration from Ph.D to M.S.

- (b) i) A research scholar who updates his/her M.Tech registration to Ph.D, may apply for reversal of registration to the original M.Tech programme if he/she completed three years after the date of original M.S registration.
- (ii) If a research scholar, who updates his/her M.Tech registration to Ph.D, fails to pass the comprehensive examination in two attempts, he/she will be reverted to the M.Tech Programme.

If the Doctoral Committee recommends the reversal of registration, and the same is approved by the Institute, the scholar must complete the requirements of the M.Tech degree within a maximum period of one year from the date of reversal of the registration from Ph.D to M.Tech.

(See M.S. and M.Tech. Ordinances and Regulations)

### **R.21 Conversion of Ph.D Registration to MS Programmes**

The Ph.D registration of a research scholar who fails to complete successfully the Comprehensive Examination in both attempts, will be given an option to convert his/her registration from Ph.D to M.S. programme if he/she so desired, otherwise his/her registration will be cancelled. The procedure for Ph.D scholars of Engineering / Management Department to convert to MS after failing in the second attempt of Comprehensive Examination is given below :

- i) First, the Ph.D. scholar has to formally convey his/her request to exercise the option for conversion of registration to the M.S. (by Research) programme to the concerned Guide(s) and Heads of Department soon after he/she is informed of his/her failure in the second attempt of the Comprehensive Examination.
- ii) The Doctoral Committee must favourably recommend the Ph.D. scholar's request for conversion to the M.S. (by Research) programme within one week from the date of receipt of the same from the concerned scholar.
- iii) Following the favourable recommendation of the DC and its subsequent approval by the Chairman, Senate, the DC will become the General Test Committee (GTC) for the scholar and the same Guide will continue.
- iv) The duration of the scholar's M.S. (by Research) programme shall not be more than 3 years from the date of first registration in the Ph.D. programme.
- v) In its first meeting following the conversion of registration, the GTC will take into account the credits earned by the scholar in the courses already undergone by him/her as a part of the Ph.D. programme. Further one more course may be prescribed by the GTC of the scholar to satisfy M.S. programme norms. This is not applicable to scholars who are directly admitted into the Ph.D programme.

- vi) The award of HTRA to the scholar will be as per the M.S. (by Research) programme.

## **R.22 Synopsis**

- (a) On satisfactory completion of the prescribed courses, the comprehensive examination and the research work, the scholar shall submit the requisite copies of the synopsis of his/her research work in the required format through the guide(s) and Head of the Department to the Academic Section for consideration of the Doctoral Committee. Prior to submission of the synopsis, the scholar is required to give at least two seminar talks on the topic of his/her research. The scholar should have at least one paper either published or accepted for publication in a refereed journal. DC may consider exceptional cases, which will be reported to Senate. This amendment shall come in to effect for scholars joined from July 2007 onwards.
- (b) The research scholar shall present the synopsis before the Doctoral Committee. The Doctoral Committee will, if it approves the work reported in the synopsis, permit the research scholar to submit the thesis and recommend a panel of at least eight examiners from outside the institute. (Foreign universities)
- (c) "Prior to submission of the synopsis, the scholar is required to give at least two seminar talks on the topic of his/her research and the first seminar talk must be given before the end of third year. The third Doctoral Committee meeting may be held after the scholar gives the first seminar talk. This will be applicable for scholars admitted from July 2010 onwards".
- (d) The Research proposal meeting may be treated as the first seminar. In case of a separate seminar meeting, it will be treated as DC meeting. There must be atleast 6 months between two seminars
- (e) Synopsis / 5<sup>th</sup> year progress meetings to be held at Deans' Office and will be chaired by HoD

### **R.23 Submission of Thesis**

The research scholar shall, within one month of acceptance of the Synopsis, submit requisite copies of the thesis and abstract of the thesis as stipulated.

The Doctoral Committee may grant additional time beyond one month on request from the scholar for valid reasons.

### **R.24 Panel of Examiners**

The thesis shall be referred to two examiners chosen by the Chairman, Senate or his nominee from among the panel of examiners recommended by the Doctoral Committee at its synopsis meeting.

DC to send the list of examiners with 8 names of experts recommending atleast 2 names of foreign university. In case, both approved are Indian examiners, both to be invited for the viva-voce examination, and atleast one should attend. Second examiner may optionally attend viva-voce through video conferencing if the examiner unable to attend viva in person. If one is unable to attend viva-voce in person / video conference, an internal examiner to be nominated.

### **R.25 Thesis Report**

- (a) The examiner is expected to send the report on the thesis within two months from the date of receipt of the thesis.
- (b) In case of undue delay in receiving the thesis report, the Chairman, Senate or his/her nominee shall appoint another examiner in his/her place for evaluating the thesis.
- (c) If one of the two thesis examiners declares the thesis as not commended, the thesis shall be referred to a third examiner from the panel for his/her evaluation.
- (d) If an examiner suggests resubmission of the thesis, after revision, the research scholar will be allowed to resubmit the thesis within the time stipulated by the Doctoral Committee failing which the revised thesis will not be accepted and his/her registration will be cancelled.
- (e) If two examiners, after referral to a third examiner, if necessary, report the thesis as not commended the registration of the scholar shall stand cancelled.

- (f) If reports of two examiners after referral to a third examiner, if necessary, declare the thesis as 'commended' the Doctoral Committee will consider the reports and recommend for conduct of viva voce which will be conducted normally not earlier than two weeks from the date of the constitution of the viva voce board. The Doctoral Committee will suggest a panel of at least four expert members out of which one member will be nominated for the viva voce board.
- Member
  - Member (s)
  - Member
- (g) In all other cases, not covered by the above Regulations the matter will be referred to the Doctoral Committee for consideration.

## **R.26 Viva Voce Examination**

(a) The following is the composition of the viva voce Board:

1. Head of the Department - Chairman  
(if HoD happens to be the Guide of the research scholar the Senior most Professor/previous HoD, will be nominated by Chairman, Senate or his nominee)
- HoD must be present for comprehensive Exam / Synopsis / Thesis report / Viva voce examination of the Scholar
2. The examiner of the thesis from within the country, or a specialist in the subject nominated by the Chairman, Senate or his nominee from the panel of examiners approved by the Doctoral Committee.
  3. Research Guide(s)
  4. A Specialist either from the Institute or outside from the panel approved by the Doctoral Committee and nominated by the Chairman, Senate or his nominee (R.25.f)
- (b) The Doctoral Committee members of the Research Scholar concerned will be invitees to the viva voce.
- (c) The viva voce board will examine the scholar on his/her thesis work and evaluate his/her performance as satisfactory or otherwise.

The viva voce board will ensure that the scholar answers satisfactorily the questions raised by the thesis examiner(s).



- (d) If the report of the viva voce board declares the performance of the research scholar not satisfactory, he/she may be asked to reappear for viva voce at a later date (not earlier than a month and not later than six months from the date of the first viva voce).

On the second occasion, the viva voce board will also include the members of the Doctoral Committee.

- (e) If the viva voce board on the second occasion also evaluates the performance of the research scholar not satisfactory, the matter will be referred to Senate for a decision.
- (f) The viva voce board may also recommend revision to be made in the final version of the thesis after taking into consideration suggestions of the examiners who evaluated the thesis and the discussion at the viva voce.

The Chairman of the viva voce board shall forward the thesis to the academic section certifying that the revisions recommended by the viva voce board, if any, have been incorporated in the copy of the thesis along with the report of the viva voce board.

- (g) All the research scholars shall submit one copy of the final form of thesis in A5 size and an electronic version in PDF format after the viva voce board recommends the award of the Ph.D degree.
- (h) The examiner's name can be appended in the final A5 copy of the thesis only with the consent of the examiner.

### **R.27 Award of Ph.D Degree**

If the performance of the research scholar in the viva voce is satisfactory, he/she will be awarded Ph.D. degree on the recommendation of the Senate and with the approval of the Board of Governors of the Institute. The award of Ph.D degrees to the scholars who have completed all the requirements for the award of Ph.D degree as and when approved by the Senate and Board of Governors will be considered on request so as to reduce the period of waiting by scholars for getting the degrees.

## **R.28 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 tend to bring down the prestige of the Institute.

Any act of indiscipline of a scholar reported to the Dean of Academic Research will be referred to a Discipline and Welfare Committee nominated by the Senate from time to time.

The committee will investigate the charges and will 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 authorise the Dean of Academic Research to take appropriate action.

The Dean will report the action taken at the next meeting of the Senate.

**Appeal:** The scholar may go in for appeal to the Chairman of the Senate whose decision will be final.

## **R.29 Power to Modify**

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

# M.S. ORDINANCES AND REGULATIONS

## ORDINANCES

- O.1 A candidate who has qualified for the award of the Bachelor's degree in Engineering/Technology of this Institute or a recognised Institute or University in the 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.
- O.2 A candidate who has qualified for the award of the M.Sc. degree in basic Sciences of this Institute or a recognised Institute or University or Master's degree in certain areas approved by the Senate is also eligible to apply for the M.S Programme in Engineering /Entrepreneurship/ Management of this Institute.
- O.3 The award of the M.S. degree shall be in accordance with the regulations of the Senate of this Institute.

## REGULATIONS

### R.1 Categories of Admission

Candidates will be admitted to the M.S. by research Programme in Engineering/Entrepreneurship/Management of the Institute under one of the following categories:

- (a) Regular full-time scholars with or without Institute fellowship or with project support.

Person employed on a project can apply for admission to M.S. programme with a minimum project experience of six months without valid GATE score subject to qualifying in selection procedure (interview / written examination) of the concerned department. They will not be eligible for HTRA until they qualify in the GATE examination. The scholars may seek conversion from project to HTRA provided they qualify in GATE with the minimum cut-off prescribed for the selection of scholars admitted in his/her batches.

Admission to MS Programmes under Regular as well as the Project category, the Departments must adopt a common cut off at the time

of calling for interview and common merit list of selection for all categories.

- (b) Research scholars who are staff members of the Institute.
- (c) Research scholars under the external registration programme sponsored by and employed in industry/organisation having R & D facilities and recognized by DST or IIT Madras, national laboratories, reputed universities/colleges or employed in research/analysis jobs in public sector/private sector/ government in the case of Management area.

*(A research scholar under the external registration programme will normally carry out part or all of his/her research work in the industry/organization/national laboratories/universities employing the scholar under the supervision of a co-guide employed in the same organization and a guide at IIT Madras. The candidate must have at least two years experience).*

- (d) Research scholars working on a part-time basis from a reputed university/ institution/ organization.

*(A research scholar working on a part-time basis shall normally carry out research work at IIT Madras under the supervision of a guide at IIT Madras. The feasibility of doing this with sufficient intensity will be an important consideration in admitting the scholar in this category.*

*The candidate must have at least two years experience in the case of Research scholars registered in Management Studies).*

**(e) MS (Applied Research)**

- a. The degree for MS (Applied Research) will be Master of Science by Research as awarded for regular MS programme.
- b. The GTC can recommend appropriate method of review for keeping thesis confidential for MS (Applied Research) programme.

## R.2 Eligibility

### R.2.1 Minimum educational qualifications

The minimum educational qualifications for admission to the M.S. by research programme in Engineering / Entrepreneurship / Management are as follows:

#### Regular full time scholars

##### 2.1.1 (i) M.S. in Engineering

- a) Candidates with a Bachelor's degree in Engineering / Technology with valid GATE score.
- b) Candidates having Associate Membership of the following professional bodies will also be eligible for admission to the M.S. programme of their parent discipline provided they have a valid GATE score and have passed both part A and part B of the Membership examinations with a good academic record. (The Institution of Engineers (India) (Civil, Mechanical, Electrical and Electronics, Electronics and communications), The Aeronautical society of India, The Indian Institute of Metals, The Indian Institute of Chemical Engineers, The Institute of Electronics and Telecommunication Engineering and other professional bodies approved by the Senate from time to time.
- c) Candidates having qualified in MFT (Major Field Test) will also be eligible for admission to the M.S. programme if the concerned department opt for it.
- d) IIT B.Tech candidates with a CGPA score of 8.0 or above on a scale of 10 [ SC/ST : 7.5 CGPA] are eligible to apply for MS Programme ( as in the case of M.Tech. Programme) and they can be offered HTRA, if selected.

##### 2.1.1 (ii) M.S. in Entrepreneurship/Management

- A) Bachelors degree or equivalent in any professional discipline of minimum four years duration or Masters degree or equivalent in a relevant discipline, with a good academic record,

**AND**

- B) A good score or pass in:

- a) national level post graduate admission qualifying examinations such as JMET/CAT/XAT/MAT/ATMA/GATE/ UGC or CSIR NET JRF or Lectureship or equivalent, or
  - b) International level post graduate admission qualifying examination such as GMAT/GRE or equivalent
  - c) at least 3 years of managerial experience in lieu of the qualifying test. (This clause is only for non-HTRA candidates)
- C) Candidates having qualified in MFT (Major Field Test) will also be eligible for admission to the M.S. programme if the concerned department opt for it.

### **2.1.2 Institute staff members/Research Scholars under External Registration / Research scholars working on part time basis.**

Bachelor's degree in Engineering/Technology or a Master's degree in appropriate Sciences / Management / Humanities and Social Sciences where eligible with a good academic record. However, Valid GATE score or CSIR / UGC NET / NBHM / JMET / CAT / AIMA or equivalent qualification may not be required in these cases.

The research scholars may be admitted to the MS programme under the part-time category from a reputed University / Institution / Organization and they must have two years experience for MS in the case of registration in Engineering/Management.

(The list of eligible disciplines in which the minimum educational qualifications have to be obtained will be provided by each department in the Admissions Brochure, which will be updated from time to time.

The Department/Selection Committee may find fit to consider meritorious candidates from disciplines other than listed at in the Admission Brochure if there is a good match between the educational/research background of the candidate and the proposed area of research.

The Admission Brochure will also include details about inter-disciplinary research areas, which may be pursued by the research scholars for the M.S. degree and the corresponding eligible disciplines given by the Departments).

Additional and stiffer criteria than the minimum educational qualifications given in R.2.1 may be set by the Department Selection Committee from

time to time for short listing candidates to be called for interview and or test.

### **R.2.2 Upgradation of registration from M.S to Ph.D Programme**

Meritorious candidates who have registered for the M.S. programme are eligible to upgrade their registration to the Ph.D programme in the same department under the supervision of the same guide(s) if they satisfy the following criteria:

- (a) The candidate should have been registered for a minimum of 2 semesters in the M.S. programme.
- (b) Minimum CGPA of 8.0 in the prescribed courses in the M.S. Programme. (See page 10 for explanation of CGPA)
- (c) Course work is compulsory and DC can suitably recommend residential requirement to complete course work.

The General Test Committee of the M.S. scholar will consider the application for upgradation of Ph.D under the supervision of the same guide(s) and make its recommendation to the Chairman, Senate to approve the upgradation of the scholar as per rule and report the same to the Senate. If approved a Doctoral Committee will be constituted to replace the General Test Committee.

The candidate should pass the comprehensive examination within a semester after upgradation to the Ph.D. programme and within two attempts.

The candidate will be treated on par with one admitted directly after a Bachelor's degree, but with the residency period and course work completed under the M.S. registration as decided by the Doctoral Committee credited to the Ph.D. programme (See Ph.D Ordinances and Regulations).

### **R.3 International Students**

Foreign nationals can only register as regular full-time scholars. Foreign nationals with degree from Indian Universities will be treated on par with Indian nationals for admission purposes. Foreign nationals with foreign degrees must meet the minimum educational requirements as given in R.2.1 equivalent to Indian Master's degree in the relevant disciplines. In addition, they should have a valid GRE/ GMAT / GATE /JMET/CAT/XAT/MAT/ATMA/UGC or CSIR /NET /JRF or an equivalent examination and should have cleared TOEFL score in the relevant

discipline. International students are expected to have a working knowledge of English.

#### **R.4 Selection Procedure**

Eligible candidates possessing the minimum educational qualifications, and satisfying additional/stiffer criteria set by the departments from time to time, will be called for an Interview and / or Test by Selection Committees of the respective departments.

For candidates who have obtained UG degree 10 years earlier as on the last date prescribed for receipt of completed application, a departmental test will be conducted.

The applications of foreign nationals may be considered without a personal interview/ test.

Based on the academic record and the performance of the candidates in the interview and/or test, the Departmental Selection Committee will recommend to the Chairman, Senate the names of candidates found suitable for admission to the M.S. in Engineering/Management programmes.

Candidates for M.S. programme in Entrepreneurship will be called by Dean IC & SR to appear for an interview and/or test. Dean IC&SR will recommend the names of the candidates suitable for admission, to the Chairman, Senate. (Guidelines for admission to M.S. Entrepreneurship is given in R. 9). The Head, Department of Management Studies shall coordinate the programme with the assistance of the IC & SR

#### **R.5 Admission**

- (a) Candidates whose selection is approved by Chairman, Senate will be admitted to M.S in Engineering/ Management/ Entrepreneurship programmes after payment of prescribed fees.
- (b) Candidates admitted to M.S in Entrepreneurship shall undergo a three-month course on 'Entrepreneurial Development' to be organised by IC & SR. At the end of the course, the candidates shall submit a pre-feasibility report on the products proposed to be developed by them at the Institute. The Dean, IC&SR will forward to the Chairman, Senate for approval for registration of the candidates for M.S in Entrepreneurship. The admission of the candidates to M.S in Entrepreneurship shall then be regularised. The General Test Committee will then be constituted.



- (c) Ordinarily, a candidate is not eligible for re-registration for M.S. after cancellation of his/her earlier registration for any reason. Based on the merits of the individual case, and taking into consideration any special circumstances, a candidate may be considered for re-registration.

## **R.6 Choice of Guide**

- (a) Allotment of research scholars to guides will be made by the Head of the Department taking into consideration the research profile of the department and the preferences of the research scholars and guides.
- (b) There shall be not more than two guides from the Institute for a research scholar.
- (c) i) Co-guide from other IITs / Institutions / Industries with a minimum academic qualification of Master's degree in Engineering / Management and with adequate professional experience in the relevant field or Ph.D in relevant area may be nominated for M.S scholars on the request of scholar / supervisor.  
(ii)The recommendation for the co-guide shall be made with valid reasons and justifications by the GTC of the research scholar.
- (d) Appointment of Co-guide by the Head of the Department on the recommendation of the guide within 12 months from the date of joining for the M.S. scholars. After the time limit, the co-guide shall be made with valid reasons and justifications by the DC of the research scholar.
- (e) Every department should send the method of guide allocation passed by their DCC to Dean (Academic Research) for approval. The procedure should be made known to faculty and students.

## **R.7 Eligibility for being Guides**

The following may be a guide for a M.S. Scholar:

- All faculty members of the Institute.
- Scientific / Design staff of the Institute with a doctoral degree.
- Continuance of retired faculty members / emeritus faculty as guides.

When a faculty member, who has guided a candidate for at least 2 years, retires, he will continue to be a guide. However, a co-guide who is in service will be appointed in addition. The guide who has

retired will be invited for the General Test Committee meetings, synopsis meeting and the viva voce examination.

- (b) A faculty member who is to retire within 2 years may be permitted to become a guide to a new scholar with another faculty member who is not likely to retire within 3 years as co-guide at the time of registration itself. On retirement, the faculty member will continue to be a guide and will be invited to the General Test Committee meetings, synopsis meeting and the viva voce examination.
- (c) CSIR and other Emeritus Fellows / Scientists / Emeritus Professors, who hold office at this Institute for a period of 1 year or more, can become co-guides for scholars, along with a guide from IIT Madras, with at least 3 years service still left at the time of registration of the scholar.
- (d) In case a faculty member who is a guide goes on leave exceeding one year duration another faculty member will be identified to become a co-guide of the research scholar.
- (e) The induction of new guides after 2 years of registration of a research scholar will be considered by the General Test Committee in the office of the Dean, Academic Research.

## **R.8 Change / Addition of Guide**

- (1) The General Test Committee of a research scholar may recommend change of guide or appointment of a co-guide for valid reasons.

## **R.9 General Test Committee**

The Head of the Department will intimate to the Dean, Academic Research for each scholar, the area of research, name(s) of the Guide(s) and a panel of names indicating the area of specialization of each faculty member for constitution of General Test Committee within 8 weeks of the date of joining of the research scholar.

- (a) The following is the composition of the General Test Committee for M.S. scholars in Engineering/ Management programmes:
  - 1 Head of the Department/ nominee of HoD (If HoD happens to be Guide of a research scholar, the Senior most Professor/previous HoD will be nominated by Chairman, Senate or his nominee) - Chairman

HoD may nominate Chairman, if he/she is otherwise engaged for the conduct of GTC meetings to assess the progress of the scholars

HoD must be present for Synopsis / Thesis report / Viva voce meetings of the Scholar

- 2 Research Guide(s) - Member(s)
- 3 Minimum of **one faculty member** of the Department nominated by the Chairman, Senate or his nominee from the suggested panel of names by HoD - Member
- 4 Minimum of **One faculty member** from allied departments of the Institute or allied institutions nominated by the Chairman, Senate or his nominee from the suggested panel of the names by HoD. - Member

In case any member goes on leave exceeding one year duration, or resigns or retires from the Institute, the Chairman, Senate or his nominee will nominate another member on the suggestion of the Chairman, General Test Committee.

Scientific/Design staff and others who are eligible to guide M.S. Scholars may be nominated as members of the General Test Committee.

- (b) The composition of the General Test Committee for research scholars under M.S in Entrepreneurship shall, apart from those indicated in (R.9 a) will include the Dean, IC & SR and a representative of the Humanities and Social Sciences Department or the Department of Management Studies as members. An advisor from industry shall also be a member of the General Test Committee. The advisor from industry should be a graduate in the area of his profession and should have been associated with an industry for a reasonable period of time. The advisor will be an invitee to the meetings of the General Test Committee.

In addition the following Guidelines be adopted for admission of candidates to M.S. (Entrepreneurship) Programme :

The Head, Department of Management Studies :

- To be Chairman of GTC

- To identify a guide from the Science / Engineering Department following due discussions depending on necessity.
- At least one member from another department of IITM other than the Department of Management Studies or from another Institution to be GTC member.

The Department of Management Studies may select twice the number of candidates with HTRA. The selected candidates be given orientation programme and he/she has to submit a report containing conceptual ideas and techno-commercial details about the proposed enterprise.

The workflow will show the details of DC meeting conducted and DC commitment of faculty members.

### R.10 Registration

- (a) The General Test Committee will meet normally within a month of being constituted, where the research scholar will make a presentation. The General Test Committee will fix/approve the date of registration for the M.S. Programme, consider the proposed research topic and prescribe/approve the courses of study in this meeting.
- (b) The registration may be backdated for research scholars employed in IC & SR projects by up to 6 months from the date of admission to the programme on the recommendation of the General Test Committee with justification. Based on the recommendation of the General Test Committee, the Senate may, additionally, permit backdating by a further period of 6 months.

### R.11 Course Work

The General Test Committee will normally prescribe three core courses and at least four electives. The prescribed courses shall be post-graduate level courses of the Institute.

- (a) M.S. research scholars with a Bachelor's degree in Engineering or Technology should successfully complete 3 core courses and at least 2 elective courses prescribed by the General Test Committee. **[minimum 15 credits (Resolution.20, 210<sup>th</sup> Senate)].**
- (b) M.S. research scholars with a Master's degree in Science or Arts who have registered for M.S. in Management or in the Computer Science & Engineering area should successfully complete 3 core

courses and at least 2 elective courses prescribed by the General Test Committee [minimum 15 credits (Resolution.20, 210<sup>th</sup> Senate)].

- (c) M.S. research scholars with a Master's degree in Science or Arts who have registered for M.S. Programme other than in Management or in the Computer Science & Engineering area should successfully complete 5 core courses and at least 3 elective courses out of 5 prescribed by the General Test Committee [minimum 24 credits (Resolution.20, 210<sup>th</sup> Senate)].

The General Test Committee may give credit to courses already undergone by a research scholar in this Institute or other Institutions provided they are the same or equivalent to those prescribed and the performance level of the scholar in them meets the minimum required. The General Test Committee may prescribe additional courses for research scholars wherever found necessary.

M.S. research scholars admitted to the programme shall obtain a minimum CGPA of 7.5 in the courses taken by them, subject to a minimum of 'C' grade in the prescribed courses. If more than the Minimum required electives have been taken, only the electives with the best performance will be considered for computing the CGPA.

(see Page 10 under PhD for explanation of CGPA & Grades)

The General Test Committee may allow the research scholars to choose not more than 3 optional courses, in addition to the courses already prescribed. It shall be open to the General Test Committee to permit or not to permit a research scholar to take optional courses in view of research work. The optional courses will not count towards the requirements of M.S. Programme. The grades obtained in these courses will be mentioned in the transcript.

- (d) M.S. research scholars who update their registration to the Ph.D programme should successfully complete 5 core courses and at least 3 elective courses prescribed by the Doctoral Committee. The Doctoral Committee may give credits to courses already successfully completed by the research scholars during their M.S. programme towards the course requirement of the updated Ph.D programme. The Doctoral Committee may prescribe additional courses for such scholars if found necessary.

## R.12 Progress Report

- (d) (a) A research scholar shall, after registration, submit annually a written report in the required format. Scholars to submit progress report through workflow to the Guide, HoD, GTC members & Office of the Dean (Academic Research) every semester. After guide's review/evaluation of the progress, HoD to approve the same and the scholar becomes eligible for enrolment.

The report should be routed through the guide to the Head of the Department, for consideration by the General Test Committee.

- (a) The progress made by a research scholar shall be reviewed by the General Test Committee once a year. Continuance of registration, and award/continuance of scholarship/Research Assistantship will be based on the recommendation of the General Test Committee. In the case of research scholars under the external registration programme or working on part-time basis, the General Test Committee will pay particular attention to the quantum of effort put in by the scholar towards M.S Studies and progress. Inadequacy of effort/progress can be a reason for cancellation of registration.
- (b) MS scholars will have a mid term review meeting before 2 years.

## R.13 Enrolment

All research scholars who are in residence and whose registration for research degree is still in force are required to enroll in person each semester on the stipulated date till their submission of thesis, on payment of the requisite fees. Those not in residence may pre-enroll in absentia during the stipulated period after payment of the requisite fees. The enrolment will be completed only after successful completion of progress meeting during the semester. The enrolment will be cancelled if the progress is not satisfactory.

## R.14 Minimum Residential Requirement

- (a) The minimum period of study and research required at the Institute from the date of registration for M.S. Programme to the date of submission of M.S. Thesis shall be 18 months for all regular full time M.S research scholars.

- (b) The minimum residential requirement for M.S research scholars under external registration or M.S research scholars working on a part-time basis not employed in the Institute is one semester.

### **R.15 Relief from M.S. programme to take up job**

M.S. research scholars who get a job offer can get relief from the programme, while keeping their registration alive on payment of the requisite fees every semester, on the following conditions:

Scholars who take up jobs will be relieved on their request, based on the recommendations of General Test Committee, if they have completed their (a) minimum residential requirement and (b) course work.

The renewal of their registration for every year/semester will be considered only if the General Test Committee finds his/her progress to be satisfactory and recommends continuance of registration.

### **R.16 Maximum Duration of Programme**

M.S. Research Scholars shall submit the thesis within three years from the date of registration. The General Test Committee may extend the period of submission of the thesis by up to 1 year for regular full time research scholars with an additional year for research scholars who are staff members of the institute, research scholars under external registration and research scholars working on a part-time basis.

### **R.17 Withdrawal from the programme**

A scholar may be permitted by the Dean, Academic Research to withdraw from the programme for a semester or longer for reasons of ill health or other valid grounds duly recommended by the General Test Committee. Normally a scholar will be permitted to discontinue from the programme only for a maximum continuous period of two semesters.

### **R.18 Cancellation of Registration**

- (a) The registration of a research scholar whose progress is not found to be satisfactory by the General Test Committee or who has not enrolled 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 as in R.16 will be cancelled.

## R.19 Reversion of updated Ph.D Registration to M.S Programme

- (a) A research scholar, who updates his/her M.S. registration to Ph.D, may apply for reversion to the M.S. programme under the supervision of the same guide(s), if he/she so desires and if he/she has completed three years after the date of original M.S. registration.
- (b) If a research scholar who updates his/her M.S. registration to Ph.D fails to pass the comprehensive examination in two attempts, he/she will be reverted to the M.S. Programme.

The Doctoral Committee will consider the application only if the scholar has completed all the course requirements prescribed originally by the General Test Committee when the scholar registered for M.S and if the research work carried out till date is found suitable for submission as an M.S thesis. If the application is found acceptable, the Doctoral Committee may recommend the reversal of registration. If the reversion is approved by the Institute, the Doctoral Committee will continue to function as the General Test Committee till the completion of the scholar's M.S. programme.

The scholar must complete the requirements of the M.S. degree within a maximum period of one year from the date of reversal of the registration from Ph.D to M.S.

## R.20 Conversion of Ph.D Registration to M.S Programme

The Ph.D registration of a research scholar who fails to complete successfully the Comprehensive Examination in both attempts, will be given an option to convert his/her registration from Ph.D to M.S. programme if he/she so desired, otherwise his/her registration will be cancelled. The procedure for Ph.D scholars of **Engineering / Management Department to convert to MS after failing in the second attempt of Comprehensive Examination** is given in R.21 / Ph.D

## R.21 Synopsis

- (a) On satisfactory completion of the prescribed courses and research, research scholars under the M.S. Programme in Engineering / Management, shall submit to the Head of the Department through their guide(s), requisite copies of the synopsis of the research work for consideration by the General Test Committee.



- (b) Research scholars under the M.S. programme in Entrepreneurship shall submit requisite copies of the synopsis in two separate volumes, one volume being the technical part and the other volume being the commercial part.
- (c) Prior to the submission of the synopsis, research scholars are required to give at least one seminar talk on the topic of their research work.  
the Research proposal meeting may be treated as the first seminar. In case of a separate seminar meeting, it will be treated as DC meeting. There must be atleast 6 months between two seminars
- (d) Research scholars are expected to publish the results of their research before submission of their theses preferably in a refereed journal.
- (e) The research scholars shall present the synopsis before the General Test Committee. The General Test Committee will, if it approves the work reported in the synopsis, permit the research scholar to submit the thesis and recommend a panel of at least six thesis examiners from outside the Institute

## **R.22 Submission of Thesis**

The research scholar shall, within one month of acceptance of the synopsis, submit the requisite copies of the thesis and abstract of the thesis as stipulated.

The General Test Committee may grant additional time beyond one month, on request from the scholar for valid reasons.

## **R.23 Panel of Examiners**

- (a) The thesis of the research scholars other than the one under the M.S. programme in Entrepreneurship shall be referred to two examiners chosen by the Chairman, Senate or his nominee from among the panel of examiners recommended by the General Test Committee at its synopsis meeting.
- (c) The thesis of the research scholars under the M.S. programme in Entrepreneurship shall be referred to two examiners, chosen by the Chairman, Senate or his nominee from among the panel of examiners recommended by the General Test Committee at its synopsis meeting, one for evaluation of the technical part and the other for evaluation of the commercial part. A brief note explaining

the objectives and scope of M.S. programme in Entrepreneurship will be sent to the examiners along with the synopsis.

- (d) nomination of examiners within the Institute to evaluate M.S. Thesis, with the following criteria:
  - i) GTC to send a list of 6 examiners which may have a maximum of 2 examiners from IIT Madras.
  - ii) Both examiners from IIT Madras may be approved by the Senate Chairman / Nominee.

#### **R.24 Thesis Report**

- (a) The examiner is expected to send the report on the thesis within six weeks from the date of receipt of the thesis.
- (b) In case of undue delay in receiving the thesis report, the Chairman, Senate or his nominee shall appoint another examiner in his/her place for evaluating the thesis.
- (d) If one of the two thesis examiners declare the thesis, as not commended, the thesis shall be referred to a third examiner from the panel for his/her evaluation.
- (e) If an examiner suggests resubmission of the thesis, after revision, the research scholar will be allowed to resubmit the thesis within the time stipulated by the General Test Committee failing which the revised thesis will not be accepted and his/her registration will be cancelled.
- (f) If two examiners, after referral to a third examiner, if necessary, report the thesis as not commended, the registration of the scholar shall stand cancelled.
- (f) **i) M.S. in Engineering/Management:**

If reports of two examiners after referral to a third examiner, if necessary, declare the thesis as 'commended' and if no viva voce is suggested, the General Test Committee will consider the reports within two weeks of receipt of copies of reports by the Chairman, General Test Committee from the Academic Section, and recommend the award of Degree of M.S. (by Research) to the scholar, with a certificate that the corrections/revisions suggested by the examiner(s) have been incorporated in the thesis.

In the event of both or one of the examiners having suggested conduct of viva voce, the viva voce Board will conduct the viva voce examination and recommend the award of degree of M.S (by Research) to the scholar, with a certificate that the performance of the research scholar in the viva voce was found to be satisfactory and that the corrections/revisions suggested by the examiner(s) have been incorporated in the thesis. The viva voce will be conducted normally not earlier than two weeks from the date of receipt of copies of reports by the Chairman, General Test Committee from the Academic Section

**ii) M.S in Entrepreneurship:**

If reports of each examiner after referral to a second examiner, (Technical or Commercial), if necessary, declare the thesis as 'commended' the viva voce board will conduct the viva voce examination and recommend the award of the Degree of M.S (by Research) in Entrepreneurship to the scholar, with a certificate that the performance of the research scholar in the viva voce was found to be satisfactory and that the corrections/revisions suggested by the examiner(s) have been incorporated in the thesis. The viva voce will be conducted normally not earlier than two weeks from the date of receipt of copies of reports by the Chairman, General Test Committee from the Academic Section.

- g) In all other cases, not covered by the above regulations the matter will be referred to the General Test Committee for consideration.

**R.25 Viva Voce Examination**

**a) i) M.S in Engineering/ Management :**

The viva voce board shall comprise the members of the General Test Committee.

**ii) M.S in Entrepreneurship:**

The viva voce board shall comprise the members of the General Test Committee.

If one of the thesis examiners cannot be present at the viva voce examination due to unforeseen circumstances, another specialist

from within the Institute or from outside approved by the Chairman, Senate or his nominee will be appointed.

- (c) The viva voce board will examine the scholar on his/her thesis work and evaluate his/her performance as satisfactory or otherwise.
- (c) If the report of the viva voce board declares the performance of the research scholar as not satisfactory, he/she may be asked to reappear for viva voce at a later date (not earlier than a month and not later than six months from the date of the first viva voce).
- (d) If the viva voce board on the second occasion also evaluates the performance of the research scholar as not satisfactory, the matter will be referred to the Senate for a decision.
- (e) The viva voce board may also recommend revision to be made in the final version of the thesis after taking into consideration, suggestions of the examiners who evaluated the thesis and the discussion at the viva voce examination. The Chairman of the viva voce board shall forward the thesis to the Academic Section certifying that the revisions recommended by the viva voce board, if any, have been incorporated in the copy of the thesis along with the report of the viva voce board.

All the research scholars shall submit one copy of the final form of the thesis in A5 size and an electronic version in pdf format after the General Test Committee or the viva voce board recommends the award of the degree.

## **R.26 Award of M.S. Degree (by Research)**

On the recommendation of the General Test Committee/viva voce board and Senate and with the approval of the Board of Governors of the Institute the research scholar will be awarded the M.S. degree (by research).

The Department of Management Studies to award the MS (Entrepreneurship) degree.

The degree for MS (Applied Research) will be Master of Science by Research as awarded for regular MS programme. .

## R.27 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 tend to bring down the prestige of the Institute.

Any act of indiscipline of a scholar reported to the Dean of Academic Research will be referred to a Discipline and Welfare Committee nominated by the Senate from time to time.

The committee will investigate the charges and will 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 authorise the Dean of Academic Research to take appropriate action.

The Dean will report the action taken at the next meeting of the Senate.

**Appeal:** The scholar may go in for appeal to the Chairman of the Senate whose decision will be final.

## R.28 Power to Modify

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