

REGULATIONS RELATING TO MS PROGRAMME

1. GENERAL

- 1.1 The Institute will provide facilities for instructions in prescribed discipline at post-graduate level with more emphasis on research content, leading to the degree of M.S.
- 1.2 The M.S. program may be offered by any of the Departments/Centres/Schools of the Institute.
- 1.3 The program will be open only to research workers in sponsored schemes/projects, sponsored candidates, and staff members of the Institute. The rules governing the sponsored candidates and permanent staff members of the Institute are given in **Appendix-I** and **Appendix-II** respectively.

2. DURATION

- 2.1 The M.S. program shall comprise the following two parts, viz.
 - I – Prescribed course work, and
 - II – Thesis
- 2.2 The normal duration of the program shall be two Academic Years (4-Semesters). MS enrolment shall be co-terminus with the start of a semester.

3. ELIGIBILITY FOR ADMISSION

- 3.1 A candidate who has passed the final examination for:
Bachelors degree in Engineering, Technology or Architecture or
Master's degree in Science or Humanities / Social Sciences/Commerce or
Master of Business Administration (done after B.A. / B.Sc. / B.Com) or
PG Diploma in Management (done after B.A./B.Sc./B.Com)
or a degree equivalent to any of them from a recognized University obtaining at least
 1. 60% marks or a CGPA 6.5 (in 10 point scale) in the case of Engineering/ Science/Commerce/Management subjects or
 2. 55% marks or CGPA 6.0 (in the 10 point scale) in the case of Humanities/ Social Science subjects, shall be eligible for admission to the program subject to the provisions of subsequent para 4.
- 3.2 A research worker (SRA, JSO, SSO, JRF, SRF) working in a scheme/project which is being carried out in the Institute is eligible to register for the program subject to satisfying the admission requirement and also subject to the condition that the tenure of the scheme remaining at the time of joining is at least two years, provided also that the investigator-in-charge of the scheme is satisfied that the candidate's joining the MS program will not interfere with his duties in the scheme.

The MS program is also open to candidates sponsored by recognized industries who have a recognized R&D program, UGC/DST sponsored laboratories, CSIR/ISRO/Defense Laboratories and Institute employees provided they satisfy the minimum qualification criterion laid down in para 3.1 above.

The Chairman of the Senate may, on the recommendation of the Departmental Academic Committee (PG&R) and RPEC, relax the above norm to the extent deemed reasonable in

the case of a sponsored candidate/permanent staff member of the Institute having long experience and/or additional professional qualification.

- 3.3 Normally the maximum age of candidate shall be below 35 years on 1st January of the year in which the admission is applied for. However the age limit can be relaxed to 45 years for candidates who have extensive experience in the field.

4. ADMISSION

- 4.1 Admission to the M.S. program of a Department/Centre/School may be granted in either of the Autumn or the Spring Semester.

- 4.2 All candidates for admission to the program must submit their application in prescribed form together with attested copies of relevant testimonials and prescribed fees by such date as may be notified by the Institute.

- 4.3 Candidates shall be required to present themselves for a personal interview before a Selection Board. Final selection of candidates shall be made by the Selection committee on the basis of their performance at the qualifying examination and at the interview. The selection Board will consist of following members:

- (i) The Head of the Department/Centre - Chairman
- (ii) Members of the Departmental Academic Committee, DAC(PG&R) - Members
- (iii) Principal Investigator of the project (if the candidate is a scheme/project staff) - Members

- 4.4 Dean (PG&S) shall on, the recommendation of the Selection Committee offer admission to the candidate in the MS program. The candidates will be required to join the program at the Department/Centre/School from the date of joining for which they have been selected.

- 4.5 Selected candidates shall be enrolled for the program only after they have been found medically fit by the SMO of the B.C. Roy Technology Hospital and they have paid all prescribed fees and deposits.

5. RESIDENCE, ATTENDANCE AND DISCIPLINE

- 5.1 The Institute is fully residential and all MS students, except Institute staff members, shall be required to reside in and be a member of the Hall of Residence to which they are assigned at the time of admission. During their stay in the Hall of Residence the students shall be governed by the rules for residence requirements as prescribed by the regulations relating to M.Tech. program. The scheme employees admitted to the program shall be guided by the existing rules of sponsored projects.

- 5.2 Attendance in all classes is compulsory. If the attendance of any student is considered to be unsatisfactory he/she may not be permitted to appear at the examination. A student with poor attendance record may be asked to discontinue his/her studies. A student can avail of leave, as applicable to M.Tech. students while the student is registered for M.S. degree. This supersedes leave rules applicable to scheme employees.

- 5.3 A sponsored student may be permitted to become non-resident after he has completed the prescribed course work and the minimum residential requirement of one semester. Students sponsored by a recognized industry/R&D Organization including a National Laboratory equipped with adequate research facilities may be permitted to carry out the

research work in their respective parent Organization. The student will have to submit the thesis within 5 years of joining the program.

5.4 Students shall conduct themselves within and outside the precincts of the Institute in a manner befitting the students of an institution of national importance. The students will be subject to all rules regarding conduct and discipline as will be applicable to M. Tech. students.

6. COURSE STRUCTURE

6.1 In order to qualify for the degree a student is required to complete the following requirements:

Part – A

a) Course work	...	Minimum	12 credits	
		Maximum	16 credits	
b) Two seminars	...		4 credits	
c) Comprehensive Viva Voce	...			4 credits

				20/24 credits

Part – B

a) Internal assessment of day to day work (by Supervisor)		10 credits
b) Evaluation of thesis by Supervisor		15 credits
c) Evaluation of thesis by “internal” expert		15 credits
d) Evaluation of thesis by “external” expert		15 credits
e) Final viva-voce conducted by DAC(PG&R), Internal expert External expert and Supervisor		15 credits

		70 credits

Total Credits 90/94 credits

A student may be assigned a few additional non-credit audit courses in addition to the prescribed course work between 12 and 16 credits.

A student will have to obtain a minimum grade of “C” in each of the components of Part “A” and “B” and have a minimum overall CGPA of 7.0 to qualify for the degree. If the grade obtained by a candidate in any subject of Part A is below ‘C’, the candidate is required to either repeat that subject and clear it with a grade not lower than ‘C’ or appear at a supplementary examination and clear it with a minimum grade “B”. Should the candidate fail to clear the course work, the DAC (PG&R) may review the performance of the student and recommend a change of course work.

6.2 The course work has to be normally completed within one year (i.e. two consecutive semesters) of joining the program.

6.3 The course work : The Departmental Academic Committee (PG&R) will, within 7 days of the students’ joining, and before the semester begins, choose supervisors for each of the students and also decide courses they will have to undergo. For a student working in a scheme, however, investigator(s) concerned will be the Supervisors. Under no circumstances a student will have more than 2 Supervisors.

While assigning course work, conducting the comprehensive viva voce and assessing performance at the seminars/synopsis of a student the Departmental Academic Committee (PG&R) will associate with it the appointed supervisor concerned if the supervisor is not a member of the Committee in any other capacity.

- 6.4 The Seminar: The student shall deliver two seminar lectures each of about one hour duration each carrying 2 Credits. The first seminar is to be delivered on completion of the course work and at the start of the thesis work; the seminar should focus on the research problem and give an outline of the nature and scope of the work the student wishes to undertake. The second seminar is to be delivered at the end of the 3rd semester or mid-way of thesis work. The student shall present the result of his work done so far. The Departmental Academic Committee (PG&R) will assess the performance of students at the seminars.
- 6.5 The comprehensive Viva Voce: The Departmental Academic committee (PG&R) will conduct the oral examination carrying 4 credits. The viva voce will cover the course work completed by the student. This should be held within one month of completion of course work.
- 6.6 A student who obtains grade below “C” in not more than one subject may either repeat it in a subsequent semester, if otherwise permissible or clear it in a supplementary examination to be held during the next vacation period (summer or winter) in which case he will be awarded one grade lower than the grade that his performance would have normally entitled him to. If a student fails to obtain at least a grade “C” in more than 1 subject, he will be asked to discontinue his studies.
- 6.7 Research work for Thesis:
 - (a) The supervisor(s) will assign the problems on which the students will carry out research for their thesis. For the students working in scheme the topic of the thesis shall be related to the scheme concerned.
 - (b) If the research problem of a student is inter-disciplinary in nature or if a sponsored candidate from an Organization (as mentioned in para 5.3 above) is permitted to carry out his research work at the place of employment, there may be a joint supervisor appointed for the student from the Institute or from the Organization, as the case may be. Under no circumstances, will a student have more than two supervisors.
 - (c) Registration for the thesis work may be done in the First semester and the research work thereon can be carried out simultaneously with the course work.

7. **SYNOPSIS**

- 7.1 A student shall submit a synopsis of the work at least one month before the date of submission of thesis. Five copies of the neatly typed synopsis are to be submitted to the Head of the Department/Centre.
- 7.2 The student shall deliver a seminar lecture on the research work he/she has done to an open audience in which besides others D.A.C. (PG&R) members will be present. This will test the candidate’s depth of knowledge and progress in his research. The candidate shall be allowed to submit his thesis for the M. S. degree only when the DAC (PG&R) is satisfied about the work. If the DAC (PG&R) is not satisfied with the quality of the work or the general preparation of the candidate, the candidate will have to appear again for the seminar within a maximum period of one month. The thesis must be submitted within two months after the D.S.C. approves the submission on the basis of this synopsis seminar. The Departmental Academic Committee (PG&R) will, if it finds the synopsis in order, forward it to the Dean (PGS) together with two panel of examiners; (a) one

consisting of names of at least five “external” experts, all within the country, and (b) the other consisting of names of at least three members of faculty from other Departments/Centres in the Institute, who will be the “internal” experts. Dean (PGS) will appoint one expert from each of the panels (a) and (b) above. The supervisor shall also be an examiner. The thesis shall be forwarded to all the examiners who shall report separately on the thesis and forward their recommendation to the Dean (PGS).

8. THESIS

8.1 A thesis must contain :

- (a) a certificate from the Supervisor(s) to the effect that (i) the work has been carried out under his/their supervision, (ii) the student has fulfilled all the prescribed requirements, and (iii) the thesis is based on the student’s own work and that it has not been submitted elsewhere for any other degree/diploma,
- (b) a brief bio-data (name, age, educational qualification, experience and home address) of the student, and
- (c) an abstract of the thesis in about 200 words, together with about 15 keywords.

8.2 The thesis should be neatly typed or printed preferably soft bound. At least 4 copies of the thesis should be submitted through the Head of the Department/Centre, within a maximum period of 2 months from the date of submission of the synopsis.

8.3 Assessment of the thesis

- 8.3.1 The thesis will be referred to an external expert, an internal expert from the approved panel and the supervisor for evaluation by them separately. The examiners will be required to award a letter grade in the 7 scale absolute Grading System (para 10 of the M.Tech. regulations) according to performance of the student.
- 8.3.2 The Dean (PGS) will examine the reports of the thesis examiners and send it to the DAC (PG&R) for necessary action. The DAC (PG&R) will direct the student to appear for a viva voce only if the grades reported by the external and internal experts and the Supervisor(s) are ‘C’ or higher. If the internal and external experts accept the thesis awarding grade ‘C’ or a higher grade but desires that certain points be clarified at the viva voce, the student will be required to satisfy the Viva Voce Board on the points before it makes its final assessment.
- 8.3.3 If one or both the experts desire revision/clarification of some points before making the assessment, the candidate is to clarify the points and revise the thesis, as the case may be. The revised thesis or the points clarified will be sent to the expert for evaluation and grading
- 8.3.4 In case the grade awarded by one of the experts is lower than ‘C’ the Dean (PGS) may, on the recommendation of DAC(PG&R) refer the thesis to another expert from the panel whose assessment shall be taken as final.
- 8.3.5 In the event of a thesis being graded lower than “C” by both the experts the Dean (PGS) may, on the recommendation of the DAC (PG&R), permit submission of a revised thesis on an additional payment of the prescribed fee within 3 months. The observations and comments of the experts may be copied and given to the candidate on request. In no case should a resubmission of the thesis without modification along the lines of criticism made by the earlier experts be allowed. The revised thesis shall be referred for assessment to another set of external and internal experts selected from the original panel of experts recommended by DAC (PG&R). The decision of the second group of experts shall be final. In case both the experts reject the revised thesis again the thesis will stand rejected.

9. FINAL VIVA VOCE EXAMINATION

Once the reports of both the experts and the supervisor have been found to be satisfactory, the candidate will have to defend his thesis before a viva voce board. A board consisting of the members of DAC (PG&R), internal expert and the supervisor will adjudicate the viva voce. The DAC (PG&R) shall recommend to the Senate the award of the M.S. degree if the viva voce is satisfactory and all other requirements have been fulfilled. If the candidate's performance at the viva voce is found to be unsatisfactory, the candidate has to appear at another viva voce examination within the next two months.

Nothing contained in these Regulations shall preclude a candidate from publishing/patenting either independently or jointly with the supervisor the results of the work incorporated in the thesis, at any time before or after submitting the thesis for examination.

10. AWARD OF DEGREE

A student who has completed satisfactorily all prescribed requirements and has cleared all fees and dues payable to the Institute and the Hall of Residence shall be eligible for the award of M.S. degree of the Institute by the Board of Governors on the recommendation of the Senate. The degree shall mention the department/centre from where the candidate has passed and shall be awarded at the annual convocation for the academic session in which the student completes the requirements satisfactorily.

APPENDIX-I

ADMISSION OF SPONSORED CANDIDATES TO MS PROGRAM

(Vide para 3.2 of the Regulations)

The Institute may admit persons who are in gainful employment as 'Sponsored students' to the MS program subject to the following conditions:

- 1.1 Persons who possess the minimum prescribed qualifications and are in service in any of the following establishments shall be eligible for admission to the MS program as sponsored students
 - (a) Defence or other ministries of the Government of India or any other government organizations;
 - (b) established industrial research and development organizations;
 - (c) autonomous bodies and public undertakings;
 - (d) universities/colleges;
 - (e) such industries as may be recognized by the Institute for the purpose from time to time.
- 1.2 Besides the sponsored candidates from the above organizations, qualified teachers from recognized Engineering Colleges shall be eligible for admission to the program.
2. The prescribed minimum qualification for admission to the MS program are given in 3.1 of the regulations. The Chairman of the Senate may, on the recommendation of the Departmental Academic Committee (PG&R) and RPEC, relax the above norm to the

extent deemed reasonable in the case of a sponsored candidate having long experience and/or additional professional qualification.

3. An intending sponsored candidate must submit his application in prescribed form for admission through his employer, who will forward the same to the Institute with suitable endorsement so as to reach the Institute by the date stipulated in the notification for the semester.
4. A sponsored scholar selected for admission shall be required, at the time of joining the Institute:
 - a) to submit evidence of having passed the qualifying examination and such other documents as the Institute may require,
 - b) to produce certificate from the employers to the effect
 - i) that he has been officially released from his duties for purpose of joining the program and has been granted the leave for the required period,
 - ii) that his services shall be retained with the employers.
5. Subsequent to joining the Institute as a sponsored research student and during the tenure, the candidate shall not be eligible for any financial support from the Institute if the sponsoring authority puts him on leave without pay or half pay.
6. (a) In the case of a sponsored candidate admitted as such to the MS program, the minimum residential requirement is one year. However, it may be reduced to one semester to be completed at a stretch, preferably immediately after joining, if the organization he is employed in has R&D facilities, and subject to conditions laid down in para 3.2 of the Regulations as well as the following sub-paras (b), (c) & (d).
 - (b) A candidate sponsored by an industry, an R&D organization, educational institution or a Government organization having adequate research facilities may be allowed to work externally subject to his fulfilling all such conditions prescribed by the Regulations as applicable. Permission to carry out the research work partially or entirely at the organization shall be granted only if the DAC (PG&R) is satisfied about availability of research facilities there and fulfillment of all requirements.
 - (c) Such permission is to be obtained in advance.
 - (d) In such a case a joint supervisor from the sponsoring organization with adequate research experience may be appointed with the approval of DAC (PG&R). When a sponsored candidate has been granted permission under these provisions to work externally at the parent organization he will be required to maintain frequent contact with the supervisor in the Institute.

APPENDIX-II

RULES RELATING TO ENROLMENT OF MEMBERS OF NON-TEACHING STAFF

(Vide item 3.2 of regulation)

1. Members of permanent non-teaching staff may be permitted to join the MS program of the Institute provided, that prior permission has been obtained from competent authority before applying for admission to the program.
2. For admission to the program a member of staff must fulfill the prescribed norms and at the qualifying examination he must have obtained at least the percentage of marks/grade/CGPA as prescribed in 3.1 as applicable. The Chairman of the Senate may,

on the recommendation of the Departmental Academic Committee (PG&R) and RPEC, relax the above norm to the extent deemed reasonable in the case of a permanent staff member of the Institute having long experience and/or additional professional qualification.

3. All common rules laid down in the MS Regulations relating to course work, prosecution of research work under the supervision of a member of faculty etc., will be applicable to all members of staff when being enrolled.
4. All members of staff permitted to join MS program must pay the prescribed enrolment-cum-registration fee and also the thesis evaluation fee before submission of the thesis on completion of the work.
5. A member of staff enrolled for the MS degree shall be exempted from payment of any tuition and other fees except the following, which all M. S. candidates are required to pay:
 - (a) Admission fee, and
 - (b) Thesis fee

Members of staff permitted and enrolled for the degree shall not be entitled to any Scholarship.

6. The other conditions for permission to the staff shall be as follows:-
 - (a) The program shall be open to only non-teaching staff of the Institute. A member of non-teaching staff seeking permission to join the research program must hold a permanent post in the Institute.
 - (b) The application for administrative permission to join a MS program by a member of non-teaching staff must be submitted through the Head of the Department/Centre/School or the Section In-charge, as the case may be. While submitting the application he/she must give an undertaking in the form appended hereto (**Schedule-A**) to the effect that he/she will abide by all rules and regulations.

The permission granted to a member of non-teaching staff to join the MS program can be withdrawn by the Institute at any time if the exigencies of Institute work so require.
 - (c) The D.A.C. (PG& R) and RPEC shall examine every application seeking permission to join the MS taking into account whether the proposal for joining the program for which permission is sought for arises out of genuine interest and ability.
 - (d) After the permission is granted the staff will submit an application on prescribed form together with the prescribed enrolment-cum-registration fee. On receipt of this application the Head of the Department/Centre/School concerned will place the same before DAC (PG&R) for allotment of the supervisor.
 - (e) The minimum period to be spent in the research work by a member of non-teaching staff registered for the MS degree shall be 3 years. The maximum period admissible for completion of the work and submission of the thesis shall, however, remain to be the same as in the case of regular candidates i.e., 5 years.

UNDERTAKING

I, Mr./Ms. member of the non-teaching staff holding a permanent post of in the Department/Centre/School of at the Indian Institute of Technology, Kharagpur, to hereby give the undertaking that I shall abide by the rules and regulations as may be laid down by the Senate of the Institute from time to time for undergoing the MS program.

I also undertake hereby that since I shall be on duty while undergoing the program of studies/research I shall ensure that all normal official duties assigned to me are executed without any handicap.

I further understand that the permission granted to me for joining the program can be withdrawn at any time if the exigencies of official duties so require or if I cause breach of any of the provisions of rules and regulations.

Date:

.....

(Signature)