

## M.S. ORDINANCES AND REGULATIONS

### ORDINANCES

- O.1 A candidate who has qualified for the award of the Bachelor's degree in Engineering/Technology/ Master's degree in Science of 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 (M.S.) by Research.
- O.2 The award of the M.S. degree shall be in accordance with the regulations of the Senate of this Institute.
- O.3 Until the Departments are formed the duties of Head of the Department will be handled by Dean R&D/ or nominee of the Dean (R&D)/ or by the Research Advisory Committee (RAC). The RAC consists of three members including the Dean (R&D) and two members nominated by the Chairman, Senate.
- O.4 Every scholar joining for the M.S. program will be monitored by a General Test Committee (GTC) constituted as per the M.S. regulations.

### REGULATIONS

#### R.1 Categories of Admission

- (a) Regular full-time scholars (FS)
- (b) Research scholars who are staff members (regular or project staff) of the Institute. (SS)

- (c) Research scholars under the external registration programme sponsored by and employed in the parent industry/organisation having R&D facilities and recognized by DST or IIT Tirupati. (EC) 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 laboratory employing the scholar under the supervision of a guide employed in the same organization and a guide at IIT Tirupati. The candidate must have at least two years experience in the parent organization.

## **R.2 Eligibility**

### **R.2.1 Minimum educational qualifications**

#### **Regular full time scholars (FS)**

The minimum educational qualifications for admission to the M.S. by research degree are as follows:

- a) Candidates with a Bachelor's degree in Engineering/Technology/Master's degree in Science with valid GATE score.
- b) Candidates having Associate Membership of the following professional bodies are also 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) Engineering graduates from IITs and other Centrally Funded Technical Institutes (CFTI) with a CGPA of at least 8/10 (7.5 for OBC-NCL and 7 for SC/ST/PwD) are eligible for seeking admission, without GATE score, to the MS Programme and they can be offered HTRA, if selected.

### **R.2.2. Part time / External registrants**

For Research Scholars in these categories, the minimum educational qualifications are the same as prescribed for full time research scholars. However, valid GATE score as applicable for regular full time research scholars shall not be required in these cases.

### **R.3 Selection Procedure**

Eligible candidates possessing the minimum educational qualifications, and satisfying additional criteria set by the Institute 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 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 M.S. by research.

#### **R.4 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 above. In addition, they should have a valid GATE or an equivalent examination and should have a valid TOEFL score. International students are expected to have a good working knowledge of English.

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

Candidates whose selection is approved by Chairman, Senate will be admitted to M.S. after payment of prescribed fees.

## **R.6 Guide(s)**

- (a) Allotment of research scholars to guides will be made by the Research Advisory Committee (RAC) of the Institute 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 for a research scholar.
- (c) One of the guides may be from an industry or other organizations. Such guides, from industry should have a minimum academic qualification of Master's degree in Engineering with adequate professional experience in the relevant field. The appointment of this guide shall be made with valid reasons and justifications by the GTC of the research scholar on recommendation of the guide (from the institute). Such a guide will need to sign Intellectual Property Right (IPR) agreement and Non-Disclosure Agreement (NDA) as formulated by IIT Tirupati.

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

- (a) All faculty members of the institute who are actively involved in research.
- (b) A faculty member who is to retire within two years may be permitted to become a guide to a scholar only along with another faculty member as a guide, who is not likely to retire within 3 years. On retirement, the faculty member will continue to be one of the guides and will be invited to the GTC meetings, synopsis meeting and viva voce examination.

- (c) In case the guide goes on leave for more than three months, another faculty member of the Institute needs to be identified by the guide to become a caretaker of the research scholar. In case one of the guides resigns or otherwise ceases to be a faculty member of the institute, the GTC will appoint a new guide in consultation with the GTC.
- (d) The induction of an additional guide as proposed by the GTC needs to be approved by the Dean (R&D).

## **R.8 Composition of GTC**

The members of the GTC of an individual research scholar shall be appointed by the Dean (R&D) within a month of joining of the research scholar. Dean (R&D) shall choose members from a panel of names recommended by the guide.

- (a) Chairman of the GTC will be the Dean (R&D) or his/her nominee until the departments are formed. If the Dean is the Guide of the scholar, a Professor nominated by the Chairman, Senate is the Chairman of the Doctoral Committee
- (b) Members of the committee:
  - (i) Research Guide/s
  - (ii) Internal Members – One faculty member of the department

- (iii) External Members - One faculty member chosen from outside the Department, or subject experts from outside the Institute

Guide will act as a convener of the GTC.

In case any member of a GTC goes on leave exceeding three months duration, or resigns or retires from the institute, the Dean (R&D) will nominate another member.

### **R.9 Meetings and Functions of GTC**

- (a) The Chairman GTC, guide/s and one of the other members should be present in any GTC meeting.
- (b) The GTC will meet once every year up to 2 years and once every six months thereafter till the thesis is submitted, to review the progress of the research scholar. The GTC may decide to meet in between the regular meetings in the case of special requirements such as insufficient progress of the Research Scholar or on special requests of the guide/scholar. The GTC will also provide a grade "Satisfactory" or "Not Satisfactory" after every meeting. Two successive "Not Satisfactory" may result in the termination of the registration.

- (c) The first meeting of the GTC shall be within one month from the date of joining, but not later than two months after the joining of the Research Scholar. In this meeting, the research scholar will present the approximate plan of the work along with the course work details, which needs to be approved by the GTC.
- (d) The GTC will provide suggestions for course corrections/improvements on the work done.
- (e) The GTC may recommend change of guide or appointment of a guide with valid reasons.
- (f) The GTC will suggest the Panel of thesis examiners.
- (g) The GTC will review the examiners' report on the thesis and conduct viva-voce if necessary.

## **R.10 Registration**

The GTC shall meet within a month of being constituted, and not later than two months of joining of the scholar. In its first meeting, the GTC shall fix/approve the proposed research topic, the date of registration for the M.S. program, and prescribe/approve the courses of study in consultation with the guide.



## 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/or equivalent courses of the sister Institutes.

M.S. research scholars with a Bachelor's degree in Engineering or Technology or Master's degree in Science should successfully complete 3 core courses and at least 2 elective courses prescribed by the General Test Committee. **[minimum 15 credits]**

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 of 'C' grade in the all the prescribed courses. If more than the minimum required electives have been taken, only the electives with the best performance will be considered.

M.S. research scholars who upgrade their registration to the Ph.D. programme should successfully complete all requirements prescribed in the Ph.D. regulations of IIT, Tirupati.

## **R.12 Progress Report**

A research scholar shall, after registration, submit a written report in the required format before two weeks of the GTC meeting. The report should be routed through the guide to all members of the GTC.

Continuance of registration, and award/continuance of Research Assistantship will be based on the recommendation of the General Test Committee.

## **R.13 Enrolment**

Enrolment in any semester defines the continuance of the research program by the scholar and should be done at the Institute where other mandatory requirements such as payment of fees are also required to be fulfilled. A semester-wise progress report by the research scholar should be submitted to the Research Guide and the guide's recommendation is a precondition for enrolment. All research scholars, are required to enrol each semester on the stipulated date till the submission of thesis.

## **R.14 Duration for completion of research towards M.S.**

The minimum period of study and research for regular M.S. research scholars at IIT Tirupati from the date of registration for the M.S. program to the date of submission of the thesis shall be 18 months. Research Scholars should submit the thesis within a maximum

of 2 years from the date of registration (excluding long leaves taken, if any). The GTC may extend the period of submission of the thesis on half yearly basis for a maximum of one year for M.S. research scholars. For external research scholars, an additional year (2+1+1 = a total of four years, excluding long leaves taken, if any) may be allowed for submission of thesis. After the stipulated period and extensions, the registration of the research scholar gets cancelled. Revoking the cancellation will be possible only with approval of the Chairman, Senate.

### **R.15 Residential Requirement for external registrants**

In order to complete the courses and to have interactions with the Guide at the Institute it is mandatory that the Research Scholar under external registration resides at the Institute for a minimum period of one semester. Over and above the mandatory requirement, the GTC may recommend extended periods of residence at the Institute.

### **R.16 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.17 Long leave from the programme**

A scholar may take leave anytime from the programme. For this, a written request has to be made to this effect by the scholar to the GTC. Upon recommendation by the GTC, the scholar may be permitted by the Dean (R&D) to take leave from the programme for a semester for reasons of ill health or other valid grounds. A letter permitting the leave will be issued by Dean (R&D). The research scholar will not be paid assistantship/fellowship during his/her period of absence.

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

- (a) If the GTC finds that the progress of the scholar is not satisfactory over two consecutive GTC meetings, or if the scholar has failed to enrol, then the registration of the scholar is liable to be cancelled.

- (b) If the student is found to be involved in any academic malpractice, which may include (but not limited to), fabrication of results, plagiarizing, or in other forms of academic dishonesty, then the registration of a scholar may be cancelled by the GTC, after investigation by the disciplinary committee.
- (c) The registration of a scholar who has not submitted the thesis before the end of the maximum permissible period as listed will be cancelled.

### **R.19 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 8/10 (7.5 for OBC-NCL and 7 for SC/ST/PwD) in the prescribed courses in the M.S. Programme.

- (c) Course work is compulsory and General Test Committee (GTC) can suitably recommend residential requirement to complete course work. 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. If approved a Doctoral Committee will be constituted to replace the General Test Committee.

The candidate should pass the comprehensive examination within two 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

## **R.20 Synopsis**

The M.S. scholar is permitted to submit the synopsis on satisfactory completion of the prescribed courses, and research work. Prior to submission of the synopsis, the M.S. scholar is required to give one seminar talk on the topic of his/her research.

This seminar is open to all faculty members and students of the institute, and any comments/suggestions that arise from this seminar may be incorporated into the thesis, after due consideration by the student and the guide(s). A notice of the seminar must be displayed at least four days in advance of the seminar.

A scholar who meets the above requirements shall submit the requisite copies of the synopsis of his/her research work in the required format through the guide(s) to the Academic Section for consideration of the GTC. The scholar shall present the synopsis before the GTC. The GTC 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 four examiners from IIT, Tirupati/Indian institutes/universities.

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

- (a) The scholars should submit the synopsis along with the first draft of the thesis soft copy to the GTC, one week before the synopsis meeting.
- (b) In the meeting, the research scholar has to present his/her work. This presentation can be for a duration of approximately 30 min. The research scholar shall, within one month of the approval of the synopsis, submit the requisite copies of the thesis and abstract of the thesis to the institute. The GTC may consider and grant additional time (a maximum of one month) on request from the scholar, for valid reasons.
- (c) The guidelines for the use of anti-plagiarism software for the M.S. thesis are as follows:

The scholars have to certify that the software "Turnitin" or any other standard software / platform was used for checking against plagiarism. (The institute will provide a standard software for this). The guide has to ensure checking against plagiarism through any standard software before submission of M.S. thesis and endorse the undertaking of the scholar. The guide may obtain a special relief from this checking from the Dean (R&D) on grounds of IP implications or National Security, if applicable.

### **R.23 Examiners**

The thesis of the research scholars under the M.S. programme shall be referred to two examiners chosen by the Dean (R&D) from among the panel of examiners recommended by the GTC in the Synopsis meeting.

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

- (a) The examiners are expected to send the report on the thesis within one month from the date of receipt of the thesis. In case of undue delay in receiving the thesis report, Dean (R&D) may appoint another examiner from the recommended list of panel members in place of the previous examiner, for evaluating the thesis.



- (b) If one of the two thesis examiners reports the thesis as not commended, the thesis shall be referred to a third examiner from the recommended panel for evaluation. If two examiners, after referral to a third examiner if necessary, report the thesis as not commended, the M.S. scholar will be denied his/her degree and his/her registration will be cancelled.
- (c) If an examiner suggests revisions or resubmission of the thesis after revision, the research scholar will be allowed to resubmit the thesis within the time stipulated by the GTC, failing which, the revised thesis will not be accepted and his/her registration will be cancelled.
- (d) If the reports of two examiners, after referral to a third examiner if necessary, declare the thesis as 'commended', the GTC will consider the reports at a Reports meeting and recommend modifications, if any to the thesis.
- (e) The soft copy of the thesis is to be circulated prior to the Reports Meeting of the GTC. The details are as follows:
- The reports are to be circulated to the GTC members along with a copy of the thesis.

- The response of the candidate as well as the modified soft copy of the thesis is to be circulated to the GTC.

**R.25 Award of M.S. Degree (by Research)**

On the recommendation of the General Test Committee 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).

**R.26 Residual Powers**

In all other cases, not covered by the above Regulations, the matter will be referred to the Dean (R&D).

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