

**ANNA UNIVERSITY TIRUCHIRAPPALLI
TIRUCHIRAPPALLI – 620 024**



**REGULATIONS
for
M.S. (By Research) Programme**

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ANNA UNIVERSITY TIRUCHIRAPPALLI

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REGULATIONS FOR M.S. (By Research) PROGRAMME

1. GENERAL ELIGIBILITY

- 1.1 Bachelors Degree in Engineering / Technology / Architecture / M.Sc. in Science of this University or any other qualification recognized as equivalent thereto in the fields of study notified from time to time by this University. Specific Educational Qualifications are given in Clause 2.
- 1.2 First class or the minimum of 60 percent marks / CGPA of 6.5 on a 10 point scale in the qualifying examination (55 percent marks or CGPA of 6.0 on a 10 point scale, in the case of SC / ST candidates).
For M.A. (English) Degree holders including SC / ST applicants a minimum of 55 percent marks is necessary.

2. EDUCATIONAL QUALIFICATIONS

Programme		Qualification for Admission
(i)	M.S. (By Research) Degree in Engineering / Technology	B.E. / B.Tech. / B.Pharm. in the relevant branch of Engineering / Technology
(ii)	M.S. (By Research) Degree in Science and Humanities	M.Sc. / M.A. in the relevant branch of Science and Humanities / M.C.A.
(iii)	M.S. (By Research) Degree in Management Sciences	B.E. / B.Tech. in any branch of Engineering / Technology or Master's degree in Commerce / Economics / Psychology / Statistics / Applied Mathematics / Mathematics / Operations Research
(iv)	M.S. (By Research) Degree in Architecture and Planning	B.Arch. / B. Plan.

3. M.S. (By Research) PROGRAMMES

Candidates who satisfy the eligibility criteria as in Clause 1 & 2 are eligible to apply for M.S. (By Research) Programme.

3.1 Full-Time M.S. (By Research) Programme

- 3.1.1 Candidates under full-time shall do research work in this University and shall be available during the working hours for curricular and related activities.
- 3.1.2 Candidates in employment, who want to pursue full-time studies should be sponsored by their employer & should avail leave for the research period should get formally relieved from their duty to join the research programme.
- 3.1.3 Foreign nationals sponsored by Government of India on any exchange programme and who satisfy the eligibility condition as per the regulations, are eligible for full-time study.

3.2 Part-Time M.S. (By Research) Programme

The following categories of candidates are eligible to apply for part-time programme.

- 3.2.1 Full time teachers of the constituent colleges / colleges affiliated to this University / Government / Government aided Polytechnic College
- 3.2.2 Candidates working in the projects undertaken from state / Central / Quasi Government and totally funded through the projects in the constituent colleges / affiliated colleges of this University. The Principal Co-ordinator of such projects shall be recognized Supervisor of this University and the candidate shall register for Research programme under such supervisor only. The candidate should be employed in the project for the minimum period of the research programme (clause 10). Part employments in different spells or in different projects are not permitted. The department where the project is undertaken should be a recognized research centre of this University.
- 3.2.3 Candidates working in Industrial units or R & D Department / Labs / Units of Government / Quasi Government or any other research laboratories which are recognized by the University to have collaborative research with the University and sponsored by the respective employer / organization.

4. PLACE OF RESEARCH

The place or places of research in respect of Full-Time & Part-Time programme are as under

4.1 Full-Time

The full-time programme shall be undertaken in the constituent colleges / Government / Government Aided Colleges and approved research departments of the affiliated colleges of this University.

4.2 Part-Time

- 4.2.1 The place of research for teachers of constituent / affiliated colleges (as specified in clause 3.2.1) shall be the college where the supervisor is working.
- 4.2.2 The place of research for the project candidates mentioned in clause 3.2.2 shall be the college where the project is undertaken
- 4.2.3 The place of research in the case of candidates working in Industrial units etc. mentioned in clause 3.2.3 shall be the college where the supervisor is working. The facilities in the industry shall also be availed for research.

5. MODE OF SELECTION

- 5.1 The candidates desirous of registering for the M.S. (By Research) Programme should apply in the prescribed application form through proper channel wherever applicable before the due date as indicated in the notification for M.S. (By Research) admission normally issued twice in a year.
- 5.2 The applications of the candidates shall be processed by the committees constituted by the Director (Research) for the purpose of selection. The

composition of such committees shall be decided taking into account the number and nature of the applications received.

- 5.3 Such committees shall screen the applications as per the eligibility norms and be responsible for the conduct of test and interview for the eligible candidates. Based on the performance of the test and interview the successful candidates shall be short listed.
- 5.4 For such short listed candidates, the committees shall nominate the supervisors, taking into consideration the area of research of the candidate & the field of specialization of the supervisors eligible to guide and forward to the Director (Research) for placing before the Research Board.

6. ADMISSION

- 6.1 The Research Board constituted by the syndicate shall determine the suitability of the such candidates and recommend for admission to the programme in the appropriate fields, after giving due consideration to the inter disciplinary fields of research if any & the Faculty in which the candidate shall be registered.
- 6.2 Such candidates shall be provisionally registered for the M.S. (By Research) Programme with the concurrence of the Vice-Chancellor and with due intimation to the concerned Supervisor, the candidate and the sponsoring institution, if any.
- 6.3 The date of provisional registration shall normally be 1st of July or the 1st of January of the year in which the candidate is admitted.

7. SUPERVISOR RECOGNITION

- 7.1 The applicant for supervisor recognition shall be working full-time in the constituent colleges / Government & Government aided colleges / affiliated colleges of this University or employed full time in the places as indicated under clause 3.2.3.
- 7.2 The faculty members already recognized as supervisors for guiding Ph.D. candidates are also eligible to guide M.S. (By Research) Candidates.
- 7.3 The applicant should possess M.E. / M.Tech. / M.S. (By Research) or equivalent Masters Degree in the relevant area of research in which he / she proposes to guide the candidate
- 7.4 The applicant shall have a minimum of one publication to his / her credit in referred journals.
- 7.5 Recognition as supervisor for guiding research work shall be accorded by the Vice-Chancellor on the recommendation of the Research Board.
- 7.6 The recognized supervisors working in industrial organizations (as in clause 3.2.3) / non-recognized research departments of the affiliated engineering colleges shall function as Joint Supervisors only.
- 7.7 Joint-Supervisors shall be recommended by the research board wherever absolutely necessary for research areas that require more than one expert.
- 7.8 A supervisor shall entertain fresh registration of candidates under him / her only up to two years prior to his / her retirement in service.

8. CHANGE OF SUPERVISOR

- 8.1 When a supervisor of a research scholar happens to be away from the University, for more than 6 months and upto one year, he / she may continue to guide the research scholar, but a supervisor-in-charge belonging to the University shall be nominated by the Director (Research) in consultation with the Head of the Department (HOD). The supervisor-in-charge will function till the supervisor returns.
- 8.2. When a supervisor of a research scholar happens to be away from the University for more than one year, an alternate supervisor shall be nominated by the Director (Research) in consultation with the concerned HOD of the Research Scholar.
- 8.3 When a supervisor retires from service on superannuation or leaves service, he / she shall make arrangements for alternative supervisor for his / her research scholar. However, the supervisor who retired from service shall continue to guide a research scholar, on his / her written request, provided he / she has guided the research scholar continuously for two years or the research scholar has submitted the synopsis. However a Joint Supervisor shall be nominated by Director (Research) in consultation with HOD to take care of the administrative and to some extent the research responsibilities of the scholar.

9. NUMBER OF CANDIDATES

A supervisor shall not normally guide more than ten research scholars for M.S. (By Research) at any time. However a supervisor shall guide five more research scholars as a Joint-Supervisor. Additional candidates, if any under extraordinary circumstances, shall be decided on the merit of the cases.

10. DURATION OF PROGRAMME

- 10.1 The duration of the programme and the time for submission of thesis are counted from the date of provisional registration vide clause 6.3. The minimum and maximum period for submission of thesis and the duration of the programme shall be as under.
- 10.2 The minimum duration for all full time scholars shall be two years and the maximum duration shall be four years.
- 10.3 The minimum duration for all part time scholars shall be three years and the maximum duration shall be four years.

11. EXTENSION OF MAXIMUM DURATION

- 11.1 In exceptional circumstances if the Monitoring Committee recommends and the Director (Research) deems it fit, a maximum grace period of 1 year beyond the normal maximum period of 4 years may be granted, six months at a time, to enable the research scholar to submit the thesis.
- 11.2 If the research scholar fails to submit the thesis within the extended period of one year, the registration shall be cancelled and the name removed from the rolls.

- 11.3 Break of study to research scholars shall be granted up to a maximum period of one year in spells of 6 months at a time. Such period shall be accounted for counting the duration of the programme (clause 10). The research scholar should remit the programme fee during the break of period.
- 11.4 The Director (Research) shall permit on deemed fit reasons for break of study of the scholar and in extraordinary circumstances medical grounds, and other compelling reasons which warrants his / her absence to the programme.

12. MONITORING COMMITTEE

- There shall be a Monitoring Committee for each scholar to monitor the progress of research.
- 12.1 The Supervisor shall furnish for every candidate a panel of names of 3 experts well versed academia, in the field of proposed research, from the faculty of the University and other organizations from whom **one** will be recommended by the Chairman / Chairperson of the Faculty, as member. Two members shall be recommended if the Head of the Department happens to be the supervisor.
- 12.2 The Supervisor of the research scholar, shall be the convener of the committee.
- 12.3 The Joint-Supervisor, if any, shall also be a member.
- 12.4 The Head of the Department of the research scholar, where he / she is doing research, shall also be ex-officio member.

13. PROGRAMME STRUCTURE

13.1 Course Work

- 13.1.1 The Monitoring Committee of a research scholar shall meet within 3 weeks from the date of communication of provisional registration of the candidate to prescribe course work for the research scholar.
- 13.1.2 A minimum of eight courses of 24 credits relevant to the area of research and offered under any approved PG programme of Anna University shall be recommended by the Monitoring Committee. If the monitoring committee suggests a mathematical PG level course shall form a course work in the above.
- 13.1.3 If any course specific to the area of research has to be newly designed, then such course shall be formulated as a special elective to be covered in not less than 45 contact hours of instruction and the course syllabus shall be designed by the monitoring committee and got approved by the Chairman of the Faculty. These courses shall be of PG level and shall be limited to two.
- 13.1.4 The prescribed course work shall normally be completed within one year from the date of provisional registration in the case of Full-time research scholar and two years in the case of Part-Time research scholar.
- 13.1.5 All the above course works of the scholar are to be undertaken as per the academic norms and shall be evaluated by the norms of this University.
- 13.1.6 No change in the course works prescribed shall be made without the approval of the Monitoring Committee.

- 13.1.7 Only courses taken after the date of provisional registration shall Count towards this requirement. Any courses already passed by the candidate prior to the registration shall not be counted for this purpose.

13.2 Comprehensive Examination

- 13.2.1 On the successful completion of the prescribed course work, as evidenced by the Grade sheet of the research scholar by the Controller of Examinations Anna University Tiruchirappalli, the Monitoring Committee shall conduct for every research scholar a qualifying / comprehensive written and oral examination to test the background knowledge of the research scholar in the broad area of specialization and the course work undergone. Based on the result of this examination the Monitoring Committee shall report to the Director (Research) the fitness of the research scholar to confirm the provisional registration and to proceed further with his / her M.S. (By Research) work within two months of the date of the examination held.
- 13.2.2 If based on the results of the comprehension examination, a research scholar is not approved by the Monitoring Committee, and then a grace period of upto a maximum of six months shall be given at the end of which the research scholar shall be re-examined. If found fit, the research scholar shall be permitted to proceed with research work. Otherwise, the research scholar's provisional registration shall be cancelled.

14. RESEARCH OUTSIDE THE UNIVERSITY

- 14.1 During the course of the M.S. (By Research) Programme, for reasons approved by the Monitoring Committee, a research scholar shall be permitted by the Director (Research) to spend up to one year in an Institution or on a project approved for the purpose, outside the University for carrying out research in areas related to the subject of investigation.
- 14.2 Research scholar shall be permitted to do research outside University on related fellowship programmes.
- 14.3 Research Scholar who carried out research outside this University shall submit the synopsis only after a minimum period of three months on his / her return

15. MONITORING PROGRESS OF CANDIDATES

- 15.1 Every six months commencing from the date of provisional registration, the candidate shall submit progress report in the prescribed format to the Supervisor who shall forward it to the Director (Research) for information and documentation, through HOD.
- 15.2 The Supervisor shall arrange to make a presentation by the research scholar on his / her work twice a year before the faculty of the department and once in a year to the Monitoring Committee which is open to faculty members and Research Scholars.

16. CANCELLATION OF REGISTRATION

- 16.1 The registration of a research scholar who has exceeded the maximum period stipulated for the M.S. (By Research) programme as in Clause 11.1 shall stand cancelled automatically.
- 16.2 The registration is liable for cancellation administratively by the Director (Research) if
- i) the research scholar has not paid the semester fees within the stipulated time with the necessary fine.
 - ii) the two consecutive six monthly progress reports are not submitted or not satisfactory
 - iii) the performance is not satisfactory to the Monitoring Committee and accordingly recommended for cancellation
 - iv) the research scholar wishes to withdraw the course and wishes to cancel his / her registration
- 16.3 In all the above cancellation cases the fees paid by the research scholar shall not be refunded.

17. SYNOPSIS OF THESIS

- 17.1 The research scholar shall be permitted to submit the synopsis only after obtaining the confirmation of registration.
- 17.2 The synopsis shall be accepted only when the research scholar has at least one paper either published or accepted for publication in a journal / conference.
- 17.3 The research scholar shall submit to the Monitoring Committee through the Supervisor, six copies of the synopsis of the M.S. (By Research) work carried out.
- 17.4 If the Monitoring Committee approves the research work reported in the synopsis, it shall forward the six copies of the approved synopsis to the Director (Research) along with a panel of atleast six examiners within India.

18. SUBMISSION OF THESIS

- 18.1 The thesis shall report, in an organised and scholarly fashion, an account of original research work of the research scholar leading to the discovery of new facts or techniques or correlation of facts already known (analytical, experimental hardware oriented etc.) and demonstrating a quality as to make a definite contribution to the advancement of knowledge and the research scholar's ability to undertake sustained research and present the findings in an appropriate manner with actual accomplishments of the work plainly stated and honestly appraised.
- 18.2 Five copies of thesis shall be prepared in accordance with the format and specification prescribed. These shall be submitted within one month of the approval of the Synopsis by the Monitoring Committee along with three copies of the abstract of the thesis in about 400 words. Under no circumstances, the thesis submission can be delayed except under extra ordinary special circumstances,

where an extension of three months may be permissible with the recommendation of the Monitoring Committee.

- 18.3 The thesis shall include a certificate of the supervisor from the University as prescribed, to the effect that the thesis is a record of the bonafide research work carried out by the research scholar under his / her supervision and guidance and that the work reported in the thesis has not been submitted elsewhere for a degree or diploma.
- 18.4 The thesis shall be scrutinized by the Scrutiny Committee constituted by the Vice-Chancellor to assess the overall layout, contents and the quality of presentation of the thesis. The deviations, if any, shall be rectified by the research scholar in consultation with the supervisor and on approval of the Director (Research). Further, the Committee shall recommend to the Vice-Chancellor to refer back the thesis to the monitoring committee for suitable revision, if the same is prepared not in conformity with the Clause 18.1
- 18.5 Fees shall be paid by the research scholars for every semester till the submission of the thesis.

19. THESIS EVALUATION

- 19.1 The thesis shall be referred to two examiners nominated by the Chairman of the faculty from the panel of examiners recommended by the Monitoring Committee. The Chairman, if he deems it necessary, may also nominate the examiners from outside the panel.
- 19.2 The Director (Research) office is to take such steps as deemed necessary to receive the reports from the examiners as quickly as possible.
- 19.3 The examiners are expected to send prescribed form their reports within two months from the date of receipt of the thesis.
- 19.4 The examiner shall include in his report an overall assessment placing the thesis in one of the following categories:
 - 19.4.1 Recommended for the award of the degree of M.S. (By Research) Commended / Highly Commended.
 - 19.4.2 Revision required.
 - 19.4.3 Rejected.
 - 19.4.4 The examiner shall enclose a report of 200 to 300 words, indicating the standard attained in the case of 19.4.1, the nature of revision in the case of 19.4.2 and the reasons in the case of 19.4.3.
- 19.5 If both the examiners recommend the award of the degree, the thesis shall be provisionally accepted. Any minor revision, modification etc. suggested by the examiners shall be carried out before the oral examination is arranged.
 - 19.5.1 If both the examiners recommend rejection, the thesis shall be rejected and the registration of the research scholar stands cancelled.
 - 19.5.2 If one examiner recommends the award of the degree while the other recommends rejection, then the thesis shall be referred to a third examiner to be nominated by

the Chairman as in 19.1. If two of the three examiners recommend the award, the thesis shall be provisionally accepted. If two of the examiners recommend rejection, the thesis shall be rejected and the registration of the research scholar stands cancelled.

- 19.5.3 If any examiner recommends revision of the thesis the candidate shall be permitted only once to revise and resubmit the thesis within 3 months and the revised thesis shall be referred to the same examiner only in the situation such as (i) when the examiner recommends new experiments and major modification involving new methodology and also (ii) the examiner insist the University to send the thesis back to the same examiner after revision for offering his final recommendation on the thesis which should only be either recommended for the award or rejected. In case, the examiner does not insist on sending the thesis back to him, the thesis shall be referred to the Monitoring Committee to ascertain the corrections carried out in the thesis as suggested by the examiners. The Monitoring Committee shall study the report of the examiners & accordingly recommend panel for constitution of oral examination board at the earliest
- 19.5.4 Individual cases not covered by the above clauses shall be referred to the Vice-Chancellor. On deemed fit reasons the Vice-Chancellor shall refer to the Research Board, which inturn shall refer to the syndicate, if necessary

20. ORAL EXAMINATION

- 20.1 The Monitoring Committee shall recommend a panel of three examiners from the concerned faculty of Anna University for constitution of an Oral Examination Board.
- 20.2 The Oral Examination Board shall be constituted by the Chairman of the Faculty as follows:
- a. One of the examiners who commended the thesis Member
 - b. A specialist from the panel Member
 - c. Supervisor of the candidate Convener
- Provided that the Chairman, if he deems necessary may nominate the members from outside the panel and the Joint-Supervisor as additional member.
- 20.3 The Oral Examination shall be conducted Open Defence Type examination.
- 20.4 If the performance for the research scholar at the Oral Examination is reported by the Oral Examination Board to be NOT SATISFACTORY, the research scholar may opt to reappear the Oral Examination at a later date (not later than 3 months from the date of the first Oral Examination). On the second occasion, the Oral Examination Board shall include one more examiner nominated by the Chairman.
- 20.5 If the performance of the candidate at the oral examination on the second occasion also reported to be NOT SATISFACTORY, the Chairman, if he deems it necessary, shall refer the remarks of the Oral Examination Board, along with the thesis and comments of the Examiners, to Committee constituted for this purpose and the decision of the Chairman shall be final.
- 20.6 After the viva-voce examination the candidate shall submit a copy of the thesis in CD ROM duly certified by the supervisor that all the corrections have been duly carried out as suggested by the examiners if any, for UNIVERSITY ARCHIVES.

21. AWARD OF M.S. (By Research) DEGREE

If the report of the Oral Examination Board is SATISFACTORY, the candidate will be awarded the M.S. (By Research) Degree with the approval of the respective Chairman of the faculty.

22. PUBLICATION OF THESIS

Papers arising out of the thesis may be published by the research scholar. However, the thesis as a whole shall not be published by the candidate without the specific approval of the Chairman.

23. THE ACT OF PLAGIARISM

- 23.1 In case of research scholars who have copied a dissertation / thesis / book for M.Phil. / M.S. or M.S. (By Research) degree his / her thesis shall be forfeited and his / her research registration shall be terminated in this University and also he / she shall be debarred to register for any other programme in this University.
- 23.2 For the abatement of above such action, the recognition of his / her supervisor shall be withdrawn for a period of 5 years and he / she shall be debarred from guiding the research scholars for any research programme in this University till such period.

24. POWER TO MODIFY

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

Note (I): The categories of eligible candidates mentioned in 3.2.1, 3.2.2 working in the constituent /Government engineering colleges are classified as Part-Time (Internal).The nomenclature shall continue as per norms for the above scholars till they are on research.

Note (II): The teachers of affiliated colleges in clause 3.2.1 and candidates from Industrial units and R & D Labs as mentioned in Clause 3.2.3 are classified as Part-Time (External). The nomenclature shall continue as per norms for the above scholars till they are on research.