

Indian Institute of Information Technology Sri City, Chittoor

Doctor of Philosophy (Ph.D.)

(For both CSE / ECE)

Regulations (Revised)

Monsoon 2020 onwards



Indian Institute of Information Technology Sri City, Chittoor

630 Gnan Marg, Sri City - 517 646, Andhra Pradesh, India

01 August 2020

Indian Institute of Information Technology Sri City, Chittoor

Ph.D. (Full-Time / Part-Time) Regulations (Revised) (Monsoons 2020 Onwards)

1) Introduction

- a) The Regulations govern the conditions for imparting courses of instruction, conduct of the examinations and evaluation to research scholar's performance leading to a Ph.D. Degree. These Regulations are effective for the batches of students admitted from the current academic session and onwards.
- b) Doctoral Programme leading to Ph.D. is offered in the following branches of the Institute:
 - i) Computer Science and Engineering
 - ii) Electronics and Communication Engineering
- c) The provisions of these Regulations shall be applicable to any new disciplines that are introduced from time to time and added to the above list.
- d) Notwithstanding any of the Clause(s) provided in the Regulations, the Senate shall exercise its powers to change / amend / interpret / implement decisions and action concerned with academic matters.
- e) The Board of Governors of the Institute may, on the recommendation of the Senate, change any or all parts of these Regulations at any time.

2) Student Status

- a) There shall be provision for 2 categories of registration to the candidates willing to register for Ph.D.
 - i) **Full Time:** Scholars who are willing to pursue Research Studies on a full-time basis
 - ii) **Part Time:** Part-time Ph.D. Programme is offered for working professionals from Govt. R&D Organizations / IT Professionals from reputed MNCs with a minimum of 2 years experience / National Research laboratories and for faculty members from Govt. / Govt. aided Colleges / Universities. Candidates working in a reputed IT Industry as IT Professionals / an organization having R & D facilities, Govt. R & D Departments / National Research Laboratories / Units of Government / Quasi Government / Public sector are considered under this category. The candidates must be officially sponsored by their employing organization. A candidate working in an establishment which is equipped with the necessary research and

library facilities only shall be considered for admission under this category. A committee appointed by the Director (consisting of Dean – Academic or his nominee, Dean – R & D or his nominee and Program Coordinator) shall assess the adequacy of these facilities before recognizing the organization for the above purpose

At the time of application the employer must expressly undertake to pay full salary to the candidate and relieve him / her to complete his/her residential requirement (residential requirement is exempted for candidates who are in commutable distance, that is, in the radius of 100 kilometers from the institute, for example students from Chennai, Greater Chennai area, etc.). A candidate applying for admission to the external registration programme must provide detailed information about the research facilities available to him / her for carrying out research. He / she should also provide the bio-data of the prospective supervisor (External guide) or Research Coordinator who would supervise/co-ordinate the candidate's work at his/her organization.

3) Educational Qualification

- a) **Full-Time:** A good academic record with M.E. / M.Tech. / M.S. or equivalent degree in any branch of Engineering/ Technology (OR) Exceptional candidates with Master's in Statistics / Mathematics / Master of Computer Applications / Electronic Sciences / Computer Science / Information Technology (or an associated area with strong background in mathematics and programming), or any other related subjects (OR) Exceptional candidates having B.E. / B.Tech or equivalent degree with a CGPA of 9.0 or above and demonstrated research capability by means of research papers, IPs and similar research outcomes may also be considered.
- b) **Part-Time (Industry / GoI Research Labs (DRDO / ISRO) / Others):** At least a First class Master degree in the applicable areas or Exceptional candidates having B.E. / B.Tech. in applicable areas. In both cases, the candidate having Master degree should have at least 2 years documented industrial experience in reputed MNCs OR Bachelors degree having 5 years documented industrial experience in reputed MNCs.

4) Selection Procedure

- a) Candidates recommended by the Applications Scrutiny Committee will be called for appearing in a written test.

- b) The candidates shortlisted based on the written test performance need to appear for a personal interview before the Evaluation Committee comprising Program Coordinator, all eligible guides and the Senate nominee (observer). The merit list for all the candidates in each category (Institute scholarships, Sponsored, External, On-Campus) is based on the cumulative score in the written test, interview, marks in UG / PG, experience, and publications. Considering the background experience, greater weightage may be given for the interview and other components (such as academic qualifications, research publications / patents, work experience, etc.) and less weightage for the written test for Part-time (External) candidates only.

5) Admission

- a) Candidates whose selection is approved by Director/Dean (Academics) or the person nominated by either of them will be admitted to the Ph.D. Programme by paying the prescribed fees. The candidate should also pay the fees every semester until the submission of Thesis as prescribed by the Institute failing which registration shall be cancelled, scholars who submit the Thesis on or before July 31 need not pay the ensuing odd semester fee. Similarly, scholars who submit the Thesis on or before January 31 need not pay the ensuing even semester fee. However a written request indicating valid reasons should be submitted and the Chairman or Dean (Academics) or his nominee shall make the final decision.
- b) A candidate is not eligible for re-registration of the Ph.D. programme after cancellation of his / her earlier registration.

6) Duration of the Programme

- a) A full-time candidate can submit the synopsis only after a minimum period of study of 24 months from the date of registration.
- b) Full-time candidates with Institute Scholarships can leave the Institute for taking up jobs, only after submission of synopsis of the thesis.
- c) A part-time candidate can submit the synopsis only after a minimum period of study of 36 months from the date of registration.
- d) The maximum period to complete the programme is 6 years for full-time candidates and 7 years for Part-time. However Scholarship will be given up to 4 years or the date of submission whichever is earlier.

7) Choice of Guide

- a) Allotment of research scholars to guides will be made by the Program Coordinator taking into consideration the areas of research of the programme and the preferences of the research scholars and guides.
- b) The candidates admitted under Part-time category will normally carry out part or all of his/her research work in their respective industry/ organization/ national laboratories / employing the scholar. For these scholars, there will be one internal guide (main guide) from IIIT Sri City and one external guide / research coordinator from his/her organization. For these scholars, IIIT faculty shall be the internal (principal) guide. Candidates admitted under this category have to spend at least 8 weeks in the first two years in the campus.
- c) There shall not be more than two guides for a research scholar.

8) Guideship

- a) All faculty members of the Institute holding doctorate degree(s) and having a minimum of 2 papers should be eligible to guide Ph.D. scholars. For Part-time, there shall be an external guide in the respective organization (called as Research Guide if he/she has PhD or called as Research Coordinator if he/she has a Master's degree alone). The internal guide shall be from among the full-time IIIT, Sricity, Chittoor faculty (of the particular programme where the research scholar is admitted to).
- b) No guide shall have more than two full-time Ph.D. Scholars selected under Institute Scholarship category at any point of time. Notwithstanding the above, eligible guides can take Ph.D. scholars with sponsorship from various funding agencies and Ph.D. part time from the Industries. The guides taking Ph.D. students for the first time, may take only one candidate at the first instant (In subsequent years, they can guide additional scholars within the mentioned limit). Also, in a given academic year, not more than two part-time candidates shall be assigned to one guide.
- c) External guides: In addition to IIIT, Sri City, Chittoor faculty, eminent professionals working in reputed research Organizations / Industrial units / R & D Departments / National laboratories / Units of Government / Quasi Government may be recognized and empanelled as eligible guides (external) in specific areas of specialization / for interdisciplinary research. These external guides should be in service throughout the Ph.D. guidance period.

- d) As the tenure of the Emeritus Fellow / Professor Emeritus will be for a period of one or two years only, they will be allowed to continue their guidance of Ph.D. scholars as per the existing superannuation.
- e) Continuance of retired faculty members as guide:
- i) When a faculty member, who has guided a candidate for 3 years, retires, he will be permitted to continue as guide on his written request, and will be invited for the Ph.D. meetings without any commitment to the Institute. But DA and TA limited to II class AC train fare, will be paid within India to attend the synopsis meeting and the Viva-voce examination.
 - ii) However, there will be a co-guide for taking care of administrative, and to some extent, the research responsibilities, of the scholar.
- f) Faculty retiring within two years and CSIR / Emeritus Fellows as Research Guide:
- i) If a faculty member is to retire within 2 years, and if he is allowed to guide any scholar, another faculty member, who is not likely to retire within 2 years, will be nominated as Co-guide of the scholar at the time of registration itself. The retired faculty member will be informed of the Ph.D. meetings, and will be invited to attend the meetings without any financial commitment to the Institute. However, the retired faculty members who continue to be guides will be paid DA and TA, limited to II class AC train fare, within India, to attend the Viva-Voce examination.
 - ii) The CSIR and other Emeritus Fellows / Scientists who hold office at this Institute for a period of 3 years and more can take fresh students during their period of appointment as Emeritus Scientists only with financial support for the candidates from other sources along with another Guide who has at least 3 years service still left at the Institute.
 - iii) Any Guide-in-charge, who has acted for more than one year during the absence of the guide allotted to the candidate, will be a special invitee / co-opted member of the Doctoral Committee when the original Guide takes over. The rest will be left to the discretion of the original Guide.
 - iv) External guides will be invited to attend Doctoral Committee meetings, Synopsis meetings, and Viva- Voce examination, TA / DA will be provided as per institute norms.

9) Change of Guide / Addition of Co-Guide

- a) The Research scholar may request the Chairman, Senate, for a change of guide or an addition of a Co-Guide for valid reasons. The Chairman of the Doctoral Committee Ph.D.) or his nominee shall convene the Doctoral Committee and based on its recommendations, the request shall be considered by the Chairman, Senate. However, the addition of a co-guide should be in the first two years or before the completion of the comprehensive viva voce examination, whichever is earlier.

10) Doctoral Committee

- a) The program coordinator will intimate to the Dean (Academic) the area of research, name(s) of the Guide(s) and a panel of names suggested by the guide for the Ph.D. for each research scholar, within one week of the date of joining of the research scholar.
- b) The following is the composition of the Doctoral Committee.
 - i) **Chairman:** One senior faculty member from the institute to be nominated by the Research Guide
 - ii) **Member:** Research Guide
 - iii) **Member:** Co-Guide (if any)
 - iv) **Member:** One faculty member nominated by the Chairman Senate or his nominee from the panel of names suggested by guide from the group
 - v) **Member:** One faculty member nominated by the Chairman senate or his nominee from the panel of names suggested by guide from other group
 - vi) **Member:** One external member from Industry / Research establishment / Academic institution to be nominated by the chairman senate or his nominee from the panel of names suggested by guide
- c) In case the Chairman, DC. or any other member goes on long leave, resigns or retires from the Institute, the Director or Dean (Academic) or his nominee will nominate another member on the suggestion of the guide.

11) Registration

- a) The DC will meet normally within a week of its being constituted, fix the date of registration for the Ph.D. programme, consider the proposed research topic and prescribe the courses of study. The external member need not be present for the first Ph.D. meeting.

12) Course Work

- a) The full time research scholars should successfully complete four courses as prescribed by the Doctoral Committee within one year (preferably in one semester for regular scholars) from the date of admission into the programme.
- b) Regularly offered electives should not be taken for Directed Study – the full time Ph.D. scholar should rather wait to study along with students.
- c) In the case of subjects, the full time Ph.D. scholar will attend classes along with students and will be evaluated in the same relative grading scale.
- d) In the case of Directed Study subjects, details of contact classes shall be maintained in the attendance book. The evaluation pattern will be similar to that of subjects – cycle tests and assignments evaluated in the Department and end semester examination conducted. However, for awarding grades, the absolute grading scale shall be followed.
- e) The minimum residential requirement for candidates under Part-time category for undertaking course work is eight weeks except for students who are in commutable distance, that is, in the radius of 100 kilometers from the institute (for example students from Chennai, Greater Chennai area). Four relevant theory courses at Master's degree level (as recommended by the Ph.D.) shall be taken by the scholar. The candidates may complete the course work during their mandatory stay of at least eight weeks which may be undertaken in the first three years. The student can also take these courses through a pre-approved online platform with a certificate with permission from the Doctoral Committee and the guide. Subsequent to the completion of course work, they can continue their research work in their respective industry / institution. However, the scholar shall spend at least one week per semester on campus until the submission of synopsis.
- f) PG level courses may also be prescribed to Ph.D. scholars they belong to and credit may be given as per usual evaluation procedure. But such courses should not have been taken by the candidate in their Post Graduate programme.
- g) No change in courses prescribed shall be made without the approval of the DC. It shall, however, be open to the DC to prescribe additional courses whenever found necessary.
- h) Courses completed after the date of registration will only count towards the requirements of award of Ph.D. degree.

- i) Research scholars admitted to the programme shall obtain at least an overall average B grade in their course work with a minimum of C grade in any individual course for successful completion of the courses prescribed.
- j) If the DC desires that the scholar should take more than 4 courses, then the credits of the extra courses need not be taken for calculating the average grade.
- k) Candidates who fail to satisfy the grade requirement, may attempt other prescribed courses or rewrite
- l) (once) the examination in the subjects(s) where they had scored less than C. If they still fail, their registration will be cancelled.

13) Progress Report

- a) Research scholars shall sign the attendance register on all working days. They are eligible for leave as per MHRD / GOI guidelines.
- b) A research scholar shall submit a written report of work done by him/her in the Prescribed Proforma to the Guide who shall forward it to the DC within two weeks before the end of each 6 months period from the date of registration up to first 2 years and before the end of each 3 months period beyond 2 years.
- c) A research scholar shall appear before the DC once in every semester .
- d) Progress evaluation meetings of the DC will be convened by the Chairman, DC. in April (for research scholars admitted in July semester) and in November (for research scholars admitted in January semester) to assess the progress in his / her research work and recommend renewal of scholarship / Part-time Teaching / Research Assistantship / registration wherever applicable. If the progress of the research scholar continues to be unsatisfactory, the DC can recommend for the cancellation of registration.

14) Comprehensive Examination

- a) On the successful completion of the prescribed course works, about one year from the date of registration, the candidate shall undergo a qualifying Comprehensive Examination to test his/her background knowledge in the broad area of specialization.
- b) The Comprehensive Examination will cover the topics in the discipline and all the allied areas. The composition of the Comprehensive Viva-Voce Board shall be as follows:

- i) All internal members of the Doctoral Committee
 - ii) One External member - Professor / Associate Professor from IIT / IISc / ISI or Scientists / Scientific Officers holding Ph.D. degree and drawing the scale of Professor and above, working in National and Regional laboratories, Defense Research Organizations, Atomic and Space Research Organizations
 - iii) One senior faculty member
- c) The External Member for comprehensive Viva-Voce Board shall be nominated by the Chairman, Senate or Dean (Academic) from a panel suggested by the Program Coordinator in consultation with the Guide(s).
- d) The Comprehensive Examination shall have a written examination (of at least one hour duration) followed by an oral examination. The Comprehensive Examination for all eligible candidates registered during a particular session will be held at a particular period. The Program Coordinator is expected to give an indicative syllabus for the written test about one month prior to the Comprehensive Examination.
- e) Based on the result of the Comprehensive Examination, the comprehensive Viva-Voce Board shall report to the Dean (Academic) about the fitness of the candidate to proceed further with his Ph.D. work, within two weeks of the date of the examination held.
- f) If, based on the results of the Comprehensive Examination, a candidate is not approved by the Comprehensive Viva-Voce Board, then a grace period of up to a maximum of six months shall be given for reexamination. If found fit, the candidate shall be permitted to proceed with doctoral work. Otherwise, the candidate's provisional registration will be cancelled.

15) Temporary Break From Ph.D. Programme

- a) Ph.D. scholars who completed their course work can be permitted to take a temporary break from the programme for up to one year for valid reasons, with the recommendation of the DC and the approval of the Dean (Academic) and Director.

16) Termination from Ph.D. Programme

- a) Unauthorized absence of any Ph.D. Scholars up to 30 days shall be referred to the disciplinary committee by the guide / co-guide (if any) / the competent authority.

- b) If a Ph.D. Scholar is indulging an unauthorized absence from the institute, he / she shall be terminated without further notice and his / her Ph.D. Registration shall be considered null and void.
- c) During the period of studentship, Ph.D. Scholars shall not take any full-time employment of any form. If a Ph.D. Scholar is found indulging in such activities, he / she may be de-registered / terminated from the Ph.D. Programme

17) Synopsis of the Thesis

- a) On satisfactory completion of the prescribed courses, the Comprehensive Examination, and the required publications in his / her research area, the research scholar shall submit one copy of the synopsis of his/her research work to the DC. Synopsis presentation and subsequent DC meeting to approve the panel of the examiners will be held in the presence of the Dean (Academic).
- b) Two seminar presentations, one seminar at the end of the second year and another one prior to submission of synopsis should be given by the Research Scholar. Publications should be in two journals (SCI, SCIE, journals with impact factor and other journals approved by the department). Publications in paid journals shall not be considered.
- c) The research scholar should present the synopsis before the DC. The DC 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 (three from India and three from Abroad).

18) Submission of Thesis

- a) The research scholar shall, within three months of submission of the synopsis, submit four copies of thesis embodying the results of investigation. On the recommendations of the Guide, Chairman or Dean (Academic), and Doctoral Committee, additional three months may be granted. In such cases, the semester registration with the payment of applicable semester fee shall be made.
- b) The Ph.D. Thesis shall be submitted along with a plagiarism report that shows less than 20% similarity score excluding the bibliography and publications of their own.
- c) The thesis submitted for the Ph.D. degree shall contain an account of the research work carried out by the scholar leading to the discovery of new facts or techniques or new correlation of facts already known (analytical and / or experimental and / or hardware oriented in nature),

the work being of such quality that it makes a definite contribution to the advancement of knowledge.

19) Panel of Examiners

- a) The thesis shall be referred to two examiners with five years of postdoctoral experience (one from overseas) chosen by the Chairman, Senate or Dean (Academic) from among the panel of examiners submitted by the Guide and recommended by the DC at its synopsis meeting.
- b) Each panel (one for Indian examiner and another for overseas examiner) should have at least three experts in the area of research. The following guidelines should be followed while deciding the panel of examiners.
 - i) **Indian Examiner:** At least one examiner from any IIT / IISc / ISI or Scientists from research institutes of national importance. The examiner(s) should have at least 5 years of Postdoctoral Experience.
 - ii) **Foreign Examiner:** Should be from research institutes/Universities. At least one should be from Universities in top 500 QS Ranking or Times University Rankings. The examiner(s) should have at least 5 years of Postdoctoral Experience
- c) If any of the examiners (Indian / Overseas) in the panel has been an examiner for any thesis submitted during the past one year, his name shall be substituted by another one.
- d) Co-authors of the paper for the particular candidate should not be nominated as an examiner.

20) Thesis Evaluation

- 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 evaluation report, the Chairman, Senate or Dean (Academic) shall appoint another examiner from the panel, for evaluating the thesis.
- c) If an examiner suggests resubmission of the thesis, after revision, the research scholar will be allowed to re-submit the thesis within the time stipulated by the DC failing which the revised thesis will not be accepted and his/her registration will be cancelled.
- d) If one of the two thesis examiners declares the thesis as not acceptable, the thesis shall be referred to a third examiner from the panel for

evaluation. If the third examiner also reports the thesis as not acceptable, the registration of the scholar shall stand cancelled.

- e) If reports of two examiners, (if necessary after referral to a third examiner) declare the thesis as 'accepted', the DC will consider the reports and recommend for conduct of oral examination which will be conducted normally not earlier than two weeks from the date of the constitution of the Oral Examination Board. The DC will suggest a panel for nomination of one member for the Oral Examination Board.
- f) In all other cases, not covered by the above Regulations, the matter will be referred to the DC for consideration.

21) Viva-Voce Examination

- a) The following is the composition of the Thesis Viva-Voce Examination Board:
 - i) **Chairman** of Doctoral Committee
 - ii) Supervisor (Research Guide) - **Member**
 - iii) Co-guide (if any) - **Member**
 - iv) **The Indian examiner** of the thesis or a specialist in the subject nominated by the Chairman, Senate or his nominee from the panel of examiners approved by the DC.
 - v) **An external examiner** - A specialist nominated by the Chairman, Senate or his nominee from a panel outside the institution who will represent foreign examiner approved by the DC.
 - vi) **The DC members** of the Research Scholar concerned will be invitees to the Viva-Voce Examination.
- b) The Examination Board will examine the scholar based on his / her thesis work and evaluate his / her performance as satisfactory or otherwise.
- c) If the Viva-Voce Examination Board declares the performance of the research scholar as not satisfactory, he / she may be asked to reappear for Viva-Voce examination at a later date (not earlier than a month and not later than six months from the date of the first oral examination). On the second occasion, the Viva-Voce Examination Board will also include the members of the DC.
- d) If the thesis Viva-Voce Examination 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 Examination 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 oral examination. The Chairman of the Viva-Voce Examination Board shall forward the thesis to the Dean (Academic) along with the report of the Viva-Voce Examination Board.

22) Award of Ph.D. Degree

If the performance of the research scholar in the Viva-Voce Examination 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.

23) 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.

=== End of the Ph.D. Regulations (Revised) ===