# M.S. and Ph.D. Regulations (Updated on 30<sup>th</sup> November 2020)

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### Ph.D. ORDINANCES AND REGULATIONS

### **ORDINANCES**

- O.1 A candidate who has qualified for the award of Master's degree of this Institute or of a recognized Institute or University in the discipline as prescribed in the regulations approved by the Senate is eligible to apply for the Ph.D. programme of the Institute.
- O.2 A candidate who has qualified for the award of Bachelor's Degree in Engineering/Technology with exceptionally good academic background in the discipline as prescribed in the regulations approved by the Senate is also eligible to apply for Ph.D. programme in Engineering/Technology/ Sciences /Humanities and Social Sciences of the Institute.
- O.3 The award of the Ph.D. degree shall be in accordance with the regulations decided by of the Senate of the Institute.
- O.4 Until the Departments are formed the duties of Head of the Department will be handled by Dean/ or nominee of the Dean / or by the Research Advisory Committee (RAC). The RAC consists of three members including the Dean and two members nominated by the Chairman, Senate.
- O.5 Every research scholar joining for the Ph.D. program will be monitored by the Doctoral Committee (DC) constituted as per the Ph.D. regulations.

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#### REGULATIONS

# **R.1. Categories of Admission**

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

- (a) Regular full-time scholars.
- (b) Research scholars who are staff members [regular or project staff] of the Institute registering for a degree on a part time basis. The project staff must fulfil the selection same criteria as regular scholars. (see <a href="Annexure I">Annexure I</a> for more details regarding project staff)
- (c) Research Scholars under external registration programme, sponsored by and employed in the following:

i) An industry/organisation recognised by the Senate of IIT Palakkad.

(see Annexure II for the list)

ii) National laboratories and CFTIs (Recommended by 9<sup>th</sup> meeting of Senate)

A research scholar under the external registration programme will normally carry out part or all of his/her research work in the parent industry/ organization/national laboratory/university employing the scholar under the supervision of a guide also employed in the same organization and a guide at IIT Palakkad.

In the case of external registration, the candidate must have at least two years experience in the parent industry/organization/national laboratories/University in Engineering/Sciences/Humani-ties.

(d) Students studying for M.Sc, M.Tech. (see Annexures  $\underline{IV}$ ,  $\underline{V}$ ) and M.S. programmes (see M.S. regulations) whose degree can be upgraded.

# R.2. Eligibility

## R.2.1. Qualification for Regular Full-Time Research

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

### 2.1.1 Ph.D. in Engineering

- (a) Candidates with a Master's degree in Engineering/Technology or a Master's degree by Research in Engineering/Technology with a good academic record.
- (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline. They should have a valid GATE score or UGC/CSIR-NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration.
- (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a Centrally Funded Technical Institute (CFTI) with an exceptionally good academic record in an eligible discipline will be considered for direct admission to Ph.D. provided he/she has a minimum CGPA of 8/10 (7.5 for OBC- NCL and 7.0 for SC/ST/PwD on a 10.0 point scale).

#### 2.1.2 Ph.D. In Sciences

Master's degree in Sciences with good academic record and have valid GATE score or UGC/CSIR/NBHM/INSPIRE/ICMR/JEST or other similar National Level Fellowships or equivalent

qualification tenable for the current financial year in the relevant area.

Candidates who have qualified for the award of Bachelor's degree in Engineering/ Technology from a Centrally Funded Technical Institute (CFTI) with an exceptionally good academic record in an eligible discipline will be considered for direct admission to Ph.D. in Sciences provided he/she has a minimum CGPA of 8/10 (7.5 for OBC- NCL and 7.0 for SC/ST/PwD on a 10.0 point scale).

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

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

R.2.2 Institute staff members/Research scholars under QIP/Research Scholars under External Registration.

For Research Scholars in these categories, the minimum educational qualifications are the same as prescribed for full time research scholars. However, valid GATE score or CSIR / UGC JRF or Lectureship / NBHM or equivalent qualification 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 the Selection Committees of the respective departments.

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

Based on the academic record and the performance of the candidates in the interview and/or test, the Departmental Selection Committee will recommend to the Chairman, Senate the names of candidates found suitable for admission to the Ph.D. Programme. (For details of shortlisting and selection, see guidelines formulated by the Senate (see Annexure III).

### R.3.1 International Students

Foreign nationals can only register as 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.4.** Admission

Candidates whose selection is approved by the Chairman, Senate will be admitted to the Ph.D. programme after payment of prescribed fees.

### R.5. Guide/s

#### R.5.1. Allotment of Research Guide

- (a) There shall be not more than two guides for a research scholar
- (b) The RAC shall decide upon the allotment of research scholars to guides.
  - This allotment will be based on the preferences of the research scholar and of the proposed guide, and shall be done soon after the student's joining the Institute.
- (c) A research scholar may have a guide from an institute other than IIT Palakkad. The guide thus chosen may be from another CFTI or from a Research Laboratory in the area of work of the research scholar. Such a guide will need to sign Intellectual Property Right (IPR) agreement and Non-Disclosure Agreement (NDA) as formulated by IIT Palakkad.
- (d) 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 RAC will appoint a new supervisor in consultation with the Doctoral Committee.
- (e) The induction of an additional guide as proposed by the existing guide needs to be approved by the Dean.

# R.5.2. Eligibility to be Guide

- (a) All faculty members of the institute who are actively involved in research.
- (b) A faculty member who is to retire within three 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 5 years. On retirement, the faculty member will continue to be one of the guides and will be invited

to the Doctoral committee meetings, synopsis meeting and viva voce examination.

### **R.6. Doctoral Committee (DC)**

- R.6.1 The members of the Doctoral Committee of an individual research scholar shall be appointed by the Dean within a month of joining of the research scholar. Dean shall choose members from a panel of names recommended by the guide.
- (a) Chairman of the Doctoral Committee is Dean 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 Two faculty members of the department
  - (iii) External Members Two faculty members chosen from outside the Department, or subject experts from outside the Institute.

Guide will act as a convener of the Doctoral Committee.

In case any member of a DC goes on leave exceeding three months duration, or resigns or retires from the institute, the Dean will nominate another member.

(c) In case of external registrants, the research co-ordinator will be invited to attend all the DC meetings (ref: 9<sup>th</sup> Senate meeting)

# R.6.2 Major functions of the DC

- (a) The Chairman DC, guide/s and at least one internal and one external member should be present in any DC meeting.
- (b) The DC will meet once every year up to 3 years and once every six months thereafter till the thesis is submitted, to review the progress of the research scholar. The DC 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 Doctoral committee 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 DC 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 DC.

- (d) The DC will provide suggestions for course corrections/improvements on the work done
- (e) The DC may recommend change of guide or appointment of a guide with valid reasons.
- (f) The DC will participate in the comprehensive viva of the research scholar.
- (g) The DC will suggest the Panel of thesis examiners
- (h) The DC will review of examiners report on the thesis
  - (i) The DC will participate in the viva-voce.

### **R.7. Registration**

The Doctoral Committee shall meet within a month of being constituted, and not later than two months of joining of the scholar as mentioned in R6.2. In its first meeting, the DC shall fix/approve the proposed research topic, the date of registration for the PhD program, and prescribe/approve the courses of study in consultation with the guide.

#### **R.8.** Course Work

Doctoral Committee in its first meeting shall prescribe two compulsory courses and a basket of four electives to be undergone by the scholar. The scholar has to undergo any two of the courses from the basket of electives prescribed by the DC. The number of courses to be undergone by the research scholar over and above the minimum prescribed is at the discretion of the Doctoral Committee. Research Methodologies seminars have to be attended by the students at the beginning of the Ph.D. courses.

All prescribed courses shall be at least of the post graduate level. In case no suitable courses are available, the Chairman of the DC may allow courses of allied departments/institutions. Offering of new courses by the Institute suitable for the research topic may also be resorted to under exigencies of circumstances.

The DC may give credit to courses already undergone by the Research Scholar in the Institution or in sister institutions in the past four years, provided the course contents and the evaluation pattern are similar. Credit to courses, already undergone by a Research Scholar will not be considered if they were credited for the award of any previous degree. UG courses, may be prescribed as additional courses. In all prescribed courses, the research scholar should earn minimum grade equivalent to the Grade C and a minimum CGPA of 7.5.

# R.9. Residential Requirement

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 DC may recommend extended periods of residence at the Institute.

## **R.10.**Monitoring of Progress

A registered research scholar shall submit a written progress report in the prescribed format annually for the first three years, and every six months thereafter. Scholars should submit the progress report through the guide/s to the Chairman and members of DC before every meeting. This should be done well in advance (at least 2 weeks) of the DC meeting for reviewing the progress of the scholar. On review/evaluation of the progress, the DC will make appropriate recommendations with regard to the research program. Continuance of registration and continuance of Research Assistantship will be based on the recommendation of the Doctoral Committee. Inadequacy of effort/progress can be a reason for cancellation of registration.

# **R.11.** Comprehensive Examination

Every Ph.D. scholar shall appear for and perform satisfactorily in a Comprehensive Examination as evaluated by a duly appointed Committee. The objective of the Comprehensive Examination is to test the general competence of the research scholar and the breadth of his/her knowledge in his/her discipline and areas related to his/her field of research.

The Comprehensive Examination shall be conducted by the Comprehensive Examination Committee, consisting of the Doctoral Committee members of the scholar and one additional member from outside the department, nominated by the Chairman of Doctoral Committee. The comprehensive exam shall be convened by Chairman of DC. The comprehensive exam shall usually consist of an oral examination and may also include a written test as decided by the department. The minimum number of examiners required to conduct the examination would be five, including the chairman.

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

If a candidate fails to clear the comprehensive exam in two attempts, his/her registration shall be cancelled.

The Comprehensive Examination Committee shall intimate to the research scholar sufficiently in advance (say 2 months) the scope of the Comprehensive Examination, so as to enable the scholar to adequately prepare for it.

The Ph.D. research scholars are normally expected to complete the Comprehensive Examination successfully within 1 year of his/her registration for the program. In exceptional cases the Dean may allow a research scholar up to three semesters from the date of his/her registration to complete the comprehensive examination.

For both written and oral components for comprehensive examination, the DC shall decide the modalities subject to approval by the Dean.

# R.12. Research Proposal

Within six months after the successful completion of comprehensive examination, there should be a detailed presentation of the Research Proposal and progress report by the research scholar in the subsequent meeting of the DC. The research proposal meeting shall be open to all. The research proposal shall contain: the title (need not be exact) of the intended study, justification/motivation of the study, international and national status of the research topic, conceptual model/hypothesis, specific objectives, detailed methodology, proposed year wise time frame for the completion of the proposed research work (in a chart form), expected outcome/deliverables, and a brief bibliography. This will be considered as the 1<sup>st</sup> Seminar by the research scholar. The Research Proposal meeting of the DC shall be conducted within TWO years of registration of the research scholar. Any delay in conducting the Research Proposal meeting has to be approved by the Chairman DC and should be informed to Dean. The research scholar shall make suitable modifications, and course corrections in the research work incorporating the suggestions of the DC in the Research Proposal meeting.

#### R.13. Enrolment

Enrolment in any semester defines the continuance of the research programme by the scholar and should be done at the Institute where other mandatory<sup>9</sup> 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 the 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 Ph.D.

The minimum period of study and research for regular full time research scholars at IIT Palakkad from the date of registration for the Ph.D. program to the date of submission of the thesis shall be 30 months. Research Scholars should submit the thesis within a maximum of 5 years from the date of registration (excluding long leaves taken, if any). The Doctoral Committee may extend the period of submission of the thesis on yearly/half yearly basis for a maximum of two years for regular full time

research scholars. For research scholars in the remaining category, an additional year (5+2+1 = a) total of eight 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.** 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 Doctoral Committee. Upon recommendation by the Doctoral Committee, the scholar may be permitted by the Dean to take leave from the programme for a semester or longer for reasons of ill health or other valid grounds. Normally a scholar will be permitted to discontinue from the programme only for a maximum continuous period of two semesters. A letter permitting the leave will be issued by Dean. The research scholar will not be paid assistantship/fellowship during his/her period of absence.

# R.16. Exit from Ph.D. Programme

- (a) If a Ph.D. scholar fails to pass the comprehensive examination in two attempts, then the scholar will be given an option to convert their registration from Ph.D. to M.S. programme, if so desired. Otherwise the scholar's registration will be cancelled. The procedure for conversion is as follows:
  - (i) The Ph.D. scholar has to give a written request to the Doctoral Committee to exercise the option for conversion of registration to the M.S. programme within two weeks after he/she is informed of the failure in the second attempt of the comprehensive examination.
  - (ii) The Doctoral Committee must give its recommendation to the Dean within a fortnight from the date of receipt of the request from the scholar.
  - (iii) Following the favourable recommendation of the Doctoral Committee and its subsequent approval by the Chairman Senate, the scholar will continue with the same guide(s) for the M.S. program.
  - (iv) The duration of the scholar's M.S. programme shall not be more than 3 years from the date of registration in the Ph.D. programme.
  - (v) The award of Half Time Research Assistantship (HTRA) to the scholar will be as applicable for the M.S. programme.

- (b) If the Doctoral Committee, on continuous assessment, finds the scholar to be incompetent to continue research leading to his/her Ph.D. degree, then the DC may recommend for the scholar's exit from the Ph.D. programme to Dean and for admission to the M.S. degree, provided the student has completed all the requirements of the M.S. degree and is equipped to complete the thesis work.
- (c) The Ph.D. scholar, due to valid personal reasons, may exit from the Ph.D. programme with an M.S. degree, provided:
  - (i) A request to this effect with proper justification is made to the Doctoral Committee at least six months before the exit, but not before the student has completed two-and-half years (excluding the period of long leave, if any) in the programme;
  - (ii) The request is approved by the Chairman Senate on the recommendations of the Doctoral Committee; and
  - (iii) The student has completed all the requirements of the M.S. degree.

In all the three cases above, if the scholar has not completed the requirements of the M.S. degree, then the scholar shall convert his/her registration to an M.S. program. In such cases, the duration of the scholar's M.S. programme shall not be more than 3 years from the date of registration in the Ph.D. programme.

(d) In case the final thesis of the Ph.D. scholar is not commended by two external examiners, then on the recommendation of the doctoral committee, the scholar may be awarded a M.S. degree.

### R.17. Cancellation of Registration

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- (a) If the Doctoral Committee finds that the progress of the scholar is not satisfactory over two consecutive Doctoral Committee 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 Doctoral Committee, 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 in R.14 will be cancelled.

### R.18. Submission of Synopsis and Publication of Research Output

Ph.D. scholars should have at least one (1) paper published or accepted for publication in Science Citation Indexed (SCI) journals. Although not mandatory, it is also recommended that the scholar's research be presented in two (2) conferences.

The scholar is permitted to submit the synopsis on satisfactory completion of the prescribed courses, the comprehensive examination and research work. Prior to submission of the synopsis, the Ph.D. scholar is required to give at least two seminar talks on the topic of his/her research (the research proposal shall be considered as the first seminar). The first seminar talk must be given within six months after the successful completion of the comprehensive exam.

The second seminar talk should constitute the important components of the scholar's research work. 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 second seminar must be displayed at least four days in advance of the seminar. The intimation that the second seminar has been given should be communicated by the research guide to the Academic Section, through the Doctoral Committee Chairman.

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 Doctoral Committee. The scholar shall present the synopsis before the Doctoral Committee. The Doctoral Committee will, if it approves the work reported in the synopsis, permit the research scholar to submit the thesis and recommend a panel of at least four examiners from Indian institutes/universities (outside the parent institute), and at least four examiners from foreign institutes/universities.

#### **R.19. Submission of Thesis**

- (a) The scholars should submit the synopsis along with the first draft of the thesis soft copy to the DC, 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 Doctoral Committee may consider and grant additional time (a maximum of three months) beyond the one month period, on request from the scholar, for valid reasons.
- (c) The guidelines for the use of anti-plagiarism software for the Ph.D. 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 Ph.D. thesis and endorse the undertaking of the scholar. The guide may obtain a special relief from this checking from the Dean on grounds of IP implications or National Security, if applicable.

(d) If a research scholar completes the requirements of the Ph.D. degree program within the stipulated period, then the assistantship/fellowship may be provided up to the completion of 5 years (excluding long leave, if any) from the date of registration.

#### **R.20.** Panel of Examiners

- (a) The Doctoral Committee has to send the list of examiners with 8 names of experts, recommending at least 4 names of experts from foreign universities/institutes. The thesis shall be referred to two examiners chosen by the Dean from among the panel of examiners recommended by the Doctoral Committee at its synopsis meeting.
- (b) In case, both experts chosen are Indian examiners, both are to be invited for the viva-voce examination, and at least one should attend.

# R. 21. Thesis Report

- (a) The examiners are expected to send the report on the thesis within two months from the date of receipt of the thesis. In case of undue delay in receiving the thesis report, Dean 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, exit provisions as in R.16 may be made available if recommended by the DC.
- 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 Doctoral Committee, failing which, the revised thesis will not be accepted and his/her registration will be cancelled.
- (d) If reports of two examiners, after referral to a third examiner if necessary, declare the thesis as 'commended', the Doctoral Committee will consider the reports at a Reports meeting, and arrange for the conduct of viva voce.

- (e) The soft copy of the thesis is to be circulated prior to the Reports Meeting and viva voce examination of the Ph.D. thesis. The details are as follows:
  - The reports are to be circulated to the DC 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 prior to the Viva-voce meeting.
- (f) The viva-voce board will be formed and chaired by the Dean. The board will consist of the guide(s), one of the thesis examiners and one internal examiner. The internal examiner will be nominated by the Dean, from an internal panel. All members of DC will be invitees to the viva-voce board. If the external examiner is unable to be physically present in the viva voce board, appropriate electronic media may be used.

#### **R.22. Viva Voce Examination**

- (a) The viva voce board will examine the scholar on his/her thesis work and evaluate his/her performance as satisfactory or otherwise. The Board may ask the research scholar to be present for a second meeting if the performance at the first meeting is not satisfactory.
- (b) If the viva voce board on the second occasion also evaluates the performance of the research scholar as not satisfactory, the matter will be referred to Chairman, Senate for a decision.
- (c) The viva voce board may also recommend revision to be made in the final version of the thesis after taking into consideration suggestions of the examiners who evaluated the thesis and based on the discussion at the viva voce.
- (d) The Chairman of the viva voce board shall forward the thesis to the academic section certifying that the revisions recommended by the viva voce board, if any, have been incorporated in the copy of the thesis along with the report of the viva voce board.
- (d) All the research scholars shall submit one copy of the final form of thesis in A5 size and an electronic version in PDF format to the institute after the viva voce board recommends the award of the Ph.D. Degree.

### R.23. Award of Ph.D. Degree

If the performance of the research scholar in the viva voce is satisfactory, and on successful completion of all the Thesis requirements, 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.

# **R.24.** Residual powers

In all other cases, not covered by the above Regulations, the matter will be referred to the Dean.

### 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 / or nominee of the Dean / or by the Research Advisory Committee (RAC). The RAC consists of three members including the Dean 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) (pl. see Annexure I) 16
- 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 Palakkad. (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 Palakkad. The candidate must have at least two years experience in the parent organization.

#### R.2. Eligibility

#### Minimum educational qualifications

### **R.2.1.** 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 Tele-communication 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

- (A) 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.
- (B) See <u>Annexure I</u> for more details on admitting project staff for research degrees.

#### **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, (see Annexure III) 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 reganizations. 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 Palakkad.

#### 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)

- 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 and a CGPA of at least 7.5. 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, Palakkad.

### 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 Palakkad 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 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) andmake 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 Upgradation of registration from M.S. to M.S.+Ph.D. (ref. 11<sup>th</sup> Senate Meeting)

Meritorious students registered in the M.S. (by research) program at IIT Palakkad have an option to convert to a M.S. + Ph.D. dual degree program subject to the following norms.

#### Eligibility for conversion to dual degree program

- 1. The student should have shown satisfactory performance during the course of their M.S. program, and in their General Test Committee (GTC) meetings.
- 2. The student is eligible for conversion any time after completing two semesters in the M.S. program.
- 3. At the time of the request, the student should have completed at least three of the five prescribed courses.
- 4. The student should have secured a CGPA of at least 8.5/10.0 with no pending backlogs in core courses at the time of conversion (relaxed to 8.0 for OBC-NCL/GEN-EWS and 7.5 for SC/ST/PwD). This CGPA will be computed at the time of conversion.

#### Procedure for conversion to dual degree program

An M.S. student registered in IIT Palakkad has two options for conversion. They can choose to:

2 Option 1: Convert from a M.S. to M.S. + Ph.D. dual degree program with the same supervisor, or

② Option 2: Complete the requirements for a M.S. degree, and continue for a Ph.D. program anytime during the year.

The following procedure applies to the two options

- 1. Interested students should make a request for conversion to the GTC with the consent of their supervisor(s).
- 2. A student who chooses to convert to a M.S. + Ph.D. dual degree program (Option 1) has to submit
- a research proposal to the GTC clearly identifying the scope of work that is proposed for the dual degree program. The GTC will consider the student's request, and make a suitable recommendation to Dean Research. The date of conversion will commence from the date of approval by Dean Research.
- 3. A student who chooses to obtain their M.S. degree and then convert to the Ph.D. program (Option 2), has to meet all requirements for the M.S. degree as per the current M.S. regulations. The GTC will consider the student's request, and make a suitable recommendation to Dean Research. After approval by Dean Research, the date of conversion will commence from the date the M.S. thesis is submitted for external review.
- 4. Upon approval by Dean Research, a Doctoral Committee (DC) will be formed, and the GTC members will be a part of the DC.

### **Fellowship**

- 1. Students who convert to the Ph.D. program are entitled to regular Ph.D. fellowship from the date of conversion.
- 2. However, for students who choose to obtain their M.S. degree and then convert to the Ph.D. program, the difference in fellowship from the time of conversion (thesis submission for external review) to the time the final revised copy of the thesis implementing all comments from the external review is accepted by the GTC, will be paid as arrears.
- 3. The maximum period of Ph.D. fellowship will be five years from the date of conversion.

#### Course and thesis requirements

1. A student who chooses to convert to a M.S. + Ph.D. dual degree program (Option 1) will have to complete a minimum of seven courses (21 credits). Of these, four courses (12 credits) should be core courses, and three courses (9 credits) should be elective courses. The student will have to submit a single thesis for the award of the dual degree. The quality and quantity of work has to be commensurate with the award of the dual degree.

2. A student who chooses to obtain M.S. degree and then convert to the Ph.D. program (Option 2) will have to complete the separate course and thesis requirements as stipulated in the current M.S. and Ph.D. regulations.

#### Exit from M.S.+Ph.D. dual degree program

M.S. students who choose to convert to the Ph.D. program will be permitted to exit the program with a M.S. degree alone, any time after their 6 semester (from the date of registration to the M.S. programme) upon recommendation by the DC, provided they complete all the requirements for the M.S. program as stipulated in the current M.S. regulations. The research work done during the Ph.D. program may be a part of their M.S. thesis, with the consent of their Ph.D. supervisor.

### **Award of Degree**

Upon completion of all requirements, the degrees awarded will be as follows:

- 1. A student who chooses to convert to a M.S. + Ph.D. dual degree program (Option 1) will be awarded a M.S. + Ph.D. dual degree.
- 2. A student who chooses to obtain M.S. degree and then convert to the Ph.D. program (Option 2) will be awarded separate degrees for their M.S. and Ph.D. programs respectively, at the end of their Ph.D. program. Provisional certificate for the M.S. degree will be issued on approval of their Ph.D. synopsis by the DC.

### 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, Palakkad/Indian institutes/universities.

#### R.21. 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.
- (d) 9<sup>th</sup> meeting of the Senate resolved that only students who have submitted at least one conference paper would be allowed to submit the M.S. thesis. This will come into effect for students who are admitted after this regulation is passed by the Senate.

### **R.22. Examiners**

The thesis of the research scholars under the M.S. program‰ 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.23. 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.24. 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.25. Residual Powers**

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

### Resolutions from the 9th Senate meeting of IIT Palakkad

# Shortlisting and Selection criteria for Research Admissions

#### A. Shortlisting

- Ph.D. in Humanities and Social Sciences. Master's degree in an eligible discipline with first class or equivalent (in terms of grades, etc.) and having a 12 | Page valid UGC-NET qualification tenable for the current year in the relevant area.
- Ph.D. in Sciences. Shortlisting will be based on qualifying examinations (NET, CSIR, GATE, JEST etc). The cut-offs for each year will be decided by the Department.
- M.S. in Engineering. The shortlisting of regular applicants (non-CFTI) for written test/interview will be based on their academic record and a valid score in a qualifying national level eligibility test (GATE/JEST/NET). The shortlisting of candidates applying under CFTI category will be based on their academic performance in the qualifying degree The minimum CGPA required for CFTI BTech candidates is 8/10 (7.5 for OBC,-NCL and 7 for SC/ST/PwD)
- Ph.D. in Engineering. The shortlisting of regular applicants for written test/interview will be based on their academic record and/or score in a qualifying national level eligibility test (GATE/JEST/NET).

The cut-off scores of academic records and qualifying national level eligibility test can be decided by each department separately (except for the requirement of minimum CGPA 8/10 (7.5 for OBC-NCL/EWS and 7.0 for SC/ST/PwD) for CFTI graduates). If XX is the cut-off general category students, then 0.9 XX will be the cut-off for OBC (NCL)/EWS and cut-off for SC/ST/PwD should be 0.67 XX or less.

#### B. Selection for Admission

- The selection of the candidates will be based on a written test and interview, with weightages of 30% and 70% respectively.
- If the number of candidates is too large, then a cut off can be set in the written test result to screen candidates who will be called for the interview. In this case, If XX is the cut-off for general category students, then 0.9 XX will be the cut-off for OBC(NCL)/EWS and 0.67 XX for SC/ST/PwD.
- If no test is conducted, interview will carry a 100% weight.

For the final selection, if XX is the cut-off for general category students, then 0.9 XX will be the cut-off for OBC(NCL)/EWS and 0.8 XX for SC/ST/PwD

# Annexure I: Admission of Project Staff for Research Degrees

Project Staff may apply for Ph.D. / MS under the Project category (after 6 months of experience in the current project) with the PI as the guide. The regulations below are for candidates who apply under the Project category.

Types of projects that are eligible for registering its project staff for Research degrees under MS (Project) or Ph.D. (Project) category:

Sponsored project.

#### MS/Ph.D. topic:

The MS/Ph.D. topic of the project staff should be preferably closely related to the topic of the project. An MS/Ph.D. topic totally different from the theme of the project is strongly discouraged.

#### Research Guide:

MS/Ph.D. guide should be the Principal Investigator of the project (or the Co-Investigator of the same project subject to the agreement of the Principal Investigator). Only under exceptional circumstances can the Research Guide be another faculty member other than the PI or Co-Investigator(s).

#### The minimum duration of the project at the time of registration of the staff for research degrees:

The minimum duration of the project funding remaining at the time of registration of the Scholar should be 1 year for M.S and 2 years for Ph.D.

# Method of selection of Project staff for Research degrees under project category:

Admission to MS/Ph.D. of a project staff should be done only after the candidate spends at least 6 months serving the project and with the consent of the PI. The method of selection should be the same as that for Regular scholars. However, the shortlisting criteria for the candidates under the project category may be different from that for regular scholars.

After selection, the candidate shall continue to receive the salary from the project. After the end of the project duration, the candidate may be considered for an HTRA fellowship for the remaining period of the MS/Ph.D. programme.

The eligibility to get HTRA after the end of the project duration will be determined by the HTRA rules at that point in time.

For M.S. and Ph.D.students, the conversion to HTRA may be done only if they meet all the norms that were met by the regular candidates in the relevant category (SC/ST, OBC(NCL), EWS and General) who were interviewed in that round/year of admissions.

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#### Conversion from Project Staff to HTRA, after the end of the project:

As long as the candidate is paid from the projects (the original project, or from other subsequent projects), and not from Institute funds, the candidate would not be expected to do halftime assistantship (apart from the project work).

After the completion of the financial support from the project, if the student wants to convert to HTRA, conversion to HTRA may be done on a case-to-case basis, by a Review Committee comprising of the DC/GTC and two additional faculty members appointed by the Dean, Academic research. The award of the HTRA beyond the project period is not automatic.

If the PI needs financial support from the Institute (HTRA) for the Research Scholar after the project duration, prior approval of post-project HTRA support must be obtained from the Director before the Ph.D./M.S. admission.

#### Number of Courses permitted per semester:

Candidates may be encouraged to do courses in advance of applying for an MS/Ph.D. The courses cleared earlier could count towards the credit requirement if the GTC/DC approves. The maximum number of courses that can be taken by the research scholar in the project category in a semester is limited to 8 credits, while the student is being paid from the project.

# Annexure II: List of Institutions recognized by the Senate IIT Palakkad for External Registration

- 1. NATPAC, Thiruvananthapuram (See minutes of Senate Meeting No. 12)
- 2. CWRDM, Kozhikode (See minutes of Senate Meeting No. 13)

# Annexure III: Shortlisting and Selection criteria for Research Admissions

#### (See minutes of Senate Meeting No. 10)

#### B. Shortlisting

- Ph.D. in Humanities and Social Sciences. Master's degree in an eligible discipline with first class or equivalent (in terms of grades, etc.) and having a 12 | Page valid UGC-NET qualification tenable for the current year in the relevant area.
- Ph.D. in Sciences. Shortlisting will be based on qualifying examinations (NET, CSIR, GATE, JEST etc). The cut-offs for each year will be decided by the Department.
- M.S. in Engineering. The shortlisting of regular applicants (non-CFTI) for written test/interview will be based on their academic record and a valid score in a qualifying national level eligibility test (GATE/JEST/NET). The shortlisting of candidates applying under CFTI category will be based on their academic performance in the qualifying degree The minimum CGPA required for CFTI BTech candidates is 8/10 (7.5 for OBC,-NCL and 7 for SC/ST/PwD)
- Ph.D. in Engineering. The shortlisting of regular applicants for written test/interview will be based on their academic record and/or score in a qualifying national level eligibility test (GATE/JEST/NET).

The cut-off scores of academic records and qualifying national level eligibility test can be decided by each department separately (except for the requirement of minimum CGPA 8/10 (7.5 for OBC-NCL/EWS and 7.0 for SC/ST/PwD) for CFTI graduates). If XX is the cut-off general category students, then 0.9 XX will be the cut-off for OBC (NCL)/EWS and cut-off for SC/ST/PwD should be 0.67 XX or less.

#### B. Selection for Admission

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- The selection of the candidates will be based on a written test and interview, with weightages of 30% and 70% respectively.
- If the number of candidates is too large, then a cut off can be set in the written test result to screen candidates who will be called for the interview. In this case, If XX is the cut-off for general category students, then 0.9 XX will be the cut-off for OBC(NCL)/EWS and 0.67 XX for SC/ST/PwD.
- If no test is conducted, interview will carry a 100% weight.

For the final selection, if XX is the cut-off for general category students, then 0.9 XX will be the cut-off for OBC(NCL)/EWS and 0.8 XX for SC/ST/PwD

### Annexure IV: Upgradation of M.Sc to M.Sc+Ph.D Dual Degree Programme

(See minutes of Senate 10)

Upgradation from M.Sc. to M.Sc.+Ph.D. Dual Degree Programme

Eligibility for upgradation.

- i. Meritorious students are eligible to upgrade to the dual degree after their third semester of the M.Sc. programme.
- ii. They should have a CGPA of at least 8.0/10 and no pending backlog at the time of upgradation (relaxed to 7.5 for OBC-NCL/GEN-EWS and 7.0 for SC/ST/PwD). This CGPA will be computed at the time of upgradation.
- iii. They are eligible to pursue the research towards their PhD in any discipline in IIT Palakkad which accepts the corresponding M.Sc. degree as an eligibility for PhD. The M.Sc. part of the dual degree will be awarded in their original discipline.

#### Selection procedure

- i. Interested students should make a request for upgradation to dual degree at the end of their third semester.
- ii. The selection will be done through a direct interview conducted by a panel of faculty members formed by the target discipline.

#### **Fellowship**

Students who upgrade to dual degree are entitled to regular PhD fellowship from the date of upgradation. The maximum period of fellowship will be five years from the date of upgradation.

#### Course requirements

- i. The students should complete at least 50 credits of coursework in the original discipline towards the M.Sc. programme by the end of three semesters from the date of registration to M.Sc. programme. They will not do an M.Sc. project, but will do additional courses in the original discipline, if required, to earn 50 credits.
- ii. In addition, they should separately complete the minimum course requirements for PhD as recommended by the doctoral committee.

Meritorious students registered in the M.Sc. programme of IIT Palakkad will have an option to upgrade their registration to an M.Sc.+Ph.D. Dual Degree Program subject to the following norms.

#### Research requirements

i. The research requirements for the dual degree (progress monitoring, research proposal meeting, thesis submission, defense etc) are the same as that of a regular PhD programme except for the exit option. While applying the PhD regulations, the scholar's duration in the PhD programme will be interpreted as the time spent by the scholar from their date of upgradation to dual degree.

#### Exit from dual degree

i. The students who upgrade to dual degree will be permitted to exit with the M.Sc. degree alone anytime after their 6th semester (from the date of registration to M.Sc. programme) provided they complete all the course requirements for the regular M.Sc. programme including the project. The research work done during the PhD programme can be part of the project. The project work has to be approved by the original stream in which the student registered before the award of the M.Sc. degree.

# Annexure V: Upgradation of M.Tech to M.Tech+Ph.D. Dual Degree Programme

(See minutes of 10<sup>th</sup> Senate Meeting)

- i. Meritorious students are eligible to upgrade to the dual degree either after their second or after their third semester of the M.Tech. programme.
- ii. They should have a CGPA of at least 8.0/10 and no pending backlog at the time of upgradation (relaxed to 7.5 for OBC-NCL/GEN-EWS and 7.0 for SC/ST/PwD). This CGPA will be computed at the time of upgradation.
- iii. They are eligible to pursue the research towards their PhD in any discipline in IIT Palakkad which accepts the corresponding M.Tech. degree as an eligibility for PhD. The M.Tech. part of the dual degree will be awarded in their original discipline.

#### Selection procedure

- i. Interested students should make a request for upgradation to dual degree either at the end of their second semester or at the end of their third semester.
- ii. The selection will be done through a direct interview conducted by a panel of faculty members formed by the target discipline.

Meritorious students registered in the M.Tech. programme of IIT Palakkad have an option to upgrade their registration to an M.Tech.+Ph.D. Dual Degree Program subject to the following norms.

Eligibility for upgradation.

#### **Fellowship**

i. Students who upgrade to dual degree are entitled to regular PhD fellowship from the date of upgradation. The maximum period of fellowship will be five years from the date of upgradation.

#### Course requirements

- i. The students should complete at least 40 credits of coursework in the original discipline towards the M.Tech. programme by the end of three semesters from the date of registration to M.Tech. programme. They will not do an M.Tech. project, but will do additional courses in the original discipline, if required, to earn 40 credits.
- ii. In addition, they should separately complete the minimum course requirements for PhD as recommended by the doctoral committee.

#### Research requirements

i. The research requirements for the dual degree (progress monitoring, research proposal meeting, thesis submission, defense etc) are the same as that of a regular PhD programme. While applying the PhD regulations, the scholar's duration in the PhD programme will be interpreted as the time spent by the scholar from their date of upgradation to dual degree.

#### Exit from dual degree

ii. The students who upgrade to dual degree will be permitted to exit with the M.Tech. degree alone anytime after their 6th semester (from the date of registration to M.Tech. programme) provided they complete all the course requirements for the regular M.Tech. programme including the project. The research work done during the PhD programme can be part of the project. The project work has to be approved by the original stream in which the student registered before the award of the M.Tech. degree.

# Annexure VI: Joint Doctoral Degree (JDD)

#### between

#### Indian Institute of Technology (IIT) Palakkad, India, and Université Bretagne Sud (UBS), France

#### Introduction:

This document narrates summary of the proposal for joint doctoral degree between Indian Institute of Technology Palakkad, India and Université Bretagne Sud, France to foster research collaboration between the two institutes. Following are the key-points which describe the joint degree program structure, structure of the thesis supervising committee, coursework requirements, duration of the thesis, and fees and expenses. A formal agreement form is attached along with this document.

In the following proposal **Home Institution** refers to the institution that is Party to the Agreement and is the institution where the student is originally enrolled. **Partner Institution** refers to the institution that is Party to the Agreement but is not the Home Institution.

#### (a) Joint Doctoral Degree (JDD) program structure:

The students who are interested in getting admitted into the JDD will be first enrolled at their Home Institute following its own selection procedures. The collaborating faculty from both the institutes will then select the JDD Student from among these students at either Institute. JDD Students selected must meet the entrance requirements of the Partner Institution. This subsequent joint selection will be carried out within six – twelve months of the student enrolling in the Ph.D. program through video conference and/or by any means including exchange of data pertaining to the students, reference letters, and so on. JDD Students who are thus admitted <sup>47</sup>nto the JDD program, will have the collaborating faculty members who selected them as their guides/supervisors. The guide/supervisor at the Home Institute will be the main guide/supervisor and the other from the Partner Institute will be the co-guide/supervisor to the student. JDD Students shall be full-time students. No part-time enrolment will be entertained under any circumstances. An Agreement for each JDD Student admitted into the program will be completed and signed by the delegated authority of each party.

#### (b) Individual Supervising Committee (ISC) structure:

An ISC will be setup for each scholar to monitor the progress of the scholar till thesis is submitted in line with the requirements of each Institution. Both the guides/supervisors at UBS France and IIT Palakkad will be members of the ISC. Details of the key guides/supervisors will be documented in the

Agreement for each student. Any changes to the ISC must be agreed by both parties. The ISC will meet a minimum of once in a year through video conferencing.

#### (c) Coursework or credit points requirements:

The JDD Student will satisfy the academic coursework requirements/credit points requirements of his/her Home Institute. Courses may be taken in any of the partner institutes when appropriate and recommended by the ISC.

#### (d) Duration of the Thesis:

JDD Students should spend a minimum of one and half year at the Partner Institute working under the supervision of their co-guide/supervisor, and taking courses if required to do so by the ISC. The maximum (if applicable) total duration of the program will be governed by the rules of the Home Institute. Each JDD Student will be entitled to the leave benefits (if any) available at Home Institute.

#### (e) Fees and Expenses:

JDD Students will pay tuition fees to their Home Institute throughout the duration of the JDD, including the duration of study at the Partner Institute, following the Home Institute fee structure. If IIT Palakkad happens to be the Home Institute, the student would be entitled for scholarships as per IIT Palakkad Rules. Financial arrangement for living stipend, travel to and from the Partner Institute, health cover and tuition fees will be documented in the Agreement for each JDP Student prior to the student being admitted into the program. IIT Palakkad will provide tuition waiver to JDD Students enrolled at UBS as the Home Institution for the duration of their program. In addition, IIT Palakkad will provide these JDD Students a scholarship, on par with IIT Palakkad students, that will fully cover living costs on campus, if they are not availing fellowship from UBS. UBS will provide a scholarship to JDD Students enrolled at IIT Palakkad as the Home institution for the duration of their program, which will cover the tuition and living expenses in France. At the time of acceptance of a student into the JDD program, arrangements for travel allowance should be confirmed by both Institutions for the student in the individual student contract/agreement form. If the travel expense (including visa costs) at the Partner Institution has to be borne by the JDD Student, his or her acceptance should be obtained during the admission process. The Home Institution will be responsible for notifying the JDD Student of such information and gaining his/her acceptance.

#### Modifications by Senate:

The Senate decided that the degree certificate issued to such students will be a joint one, with emblems of both the Institutes.

The agreement that is to be signed is given in the Minutes of the Meeting of the 11<sup>th</sup> Senate, pages 154 to 188. Note that the Senate has deleted item 22 of the agreement.

#### Annexure VII: Research Collaboration between IIT Palakkad and TIFR

Senate Decisions:

A template for signing a Memorandum of Understanding with TIFR for academic collaboration including student exchange was discussed.

The proposal was approved with the following modifications.

- 1. In the bullet points on the first page, the item 4,on the sponsorship of seminars, workshops and other academic meetings is to be deleted.
- 2. In Annexure I, item 5 specifying the number of students to be taken is to be deleted.
- 3. In Annexure I, the statement "IITPKD shall provide a monthly stipend to visiting MS/Ph.D. scholars under the Exchange programme is, sufficient to cover living expenses on campus" will be replaced with: "IITPKD shall provide free hostel accommodation to visiting MS/Ph.D. scholars under the Exchange programme.

The form that is to be signed is given in the Minutes of the 11st Senate meeting as pages 164 to 167.