

INDIAN INSTITUTE OF SCIENCE
EDUCATION AND RESEARCH
THIRUVANANTHAPURAM

*An autonomous institution under the Ministry of Human Resource Development,
Government of India*



GUIDE BOOK OF CURRICULUM AND REGULATIONS FOR
PH.D. PROGRAMME

2010 - 11
www.iisertvm.ac.in

Indian Institute of Science Education and Research Thiruvananthapuram has been established by the MHRD, Govt. of India to foster higher education and research in basic sciences and interdisciplinary areas of Science. Accordingly it has Schools of Life Sciences, Chemical and Physical Sciences, Mathematical Sciences, Humanities and Social Sciences and Interdisciplinary Sciences. The curriculum consists of Integrated Masters' program of 5 years after +2 and Doctoral program in sciences.

This booklet outlines the rules and regulations of the Ph.D. program common to all Schools.

IISER THIRUVANANTHAPURAM CAMPUS

IISER TVM started functioning in August 2008 at the transit campus in the Department of Computer Science of the College of Engineering, Thiruvananthapuram (CET). The Institute is residential. This means all students will reside in the Institute hostels. The permanent campus of IISER TVM is coming up at Vithura, about 40 km from Thiruvananthapuram City, at the foothills of the Ponmudi Hills.

Contents

Regulations	1
Admission	1
Research Guide	1
Doctoral Committee	1
Course Work	2
Comprehensive Examination	2
Research	2
Thesis Examination	3
Viva Voce Examination	5
Ethical Regulations	5
Duration of Ph.D. Program	6
Residence Requirements	6
Temporary Withdrawal	6
Fellowship Rules	6
Leave	6
Appendices	7
A. Honour Pledge	7
B. Anti-ragging Pledge	7
C. Faculty	7
Visiting Faculty	10
Laboratory Coordinator	10
D. Administration	10

Regulations

Admission

Eligibility

1. A Master's degree in Science, Bachelor's degree in Engineering or Medicine with a First Class or equivalent.
2. The candidate must have a valid score in any one of the following National Examinations: CSIR-UGC NET, DBT-JRF, GATE, JEST, ICMR-JRF, NBHM etc

Selection Procedure

Twice every year, students are admitted to the Ph.D. Program, at the beginning of the Varsha (August) and Vasanth (January) semesters of the Institute. Applications will be invited through Press advertisement and announcement at the Institute website : www.iisertvm.ac.in. Shortlisted candidates will be called for an interview at IISER Thiruvananthapuram. The names of the selected candidates will be announced at our website.

Enrolling Procedure

The successful candidate has to register for the Ph.D. program by producing originals of the required certificates and payment of the registration fees on the day prescribed for Registration. *Registration is to be done at the beginning of every semester*

Research Guide

After Registration, the Institute will assign a research guide(s) to the student depending on mutual research interests. The guide is primarily responsible for the work and well being of the scholar.

Doctoral Committee

Each scholar will have a Doctoral Committee (DC) appointed by the Institute. The committee will consist of the Guide, the Chairperson of the School and two other

members of the IISER faculty who are in research areas related to the proposed work of the scholar. The major role of the Committee is to monitor the progress of the work, both course work and research, of the scholar up to the point of the award of the Degree.

The Doctoral Committee meets at least once every semester. At the first meeting of the first semester of the scholar's program, the Committee identifies the courses to be credited/audited by the scholar (see below for details of course work). At every subsequent meeting, the scholar presents the progress of his/her work. The semester-wise report of the Committee on the scholar's progress is mandatory at the time of the registration of the scholar in each semester.

Course Work

The scholar should complete, within the first two years of enrolling, course work as follows:

1. Courses as prescribed by the Doctoral Committee, for a minimum of 12 Credits. Increase in the course requirement if needed will be decided by the Doctoral Committee.
2. Integrated MS students of IISERS will do a minimum of 6 credits
3. The CGPA of the completed courses must not be below 7.
4. The Committee may, at any time, prescribe additional courses.
5. Courses of the MS program, if prescribed, must be of the 300 level or higher (see MS Guide Book for details of courses).

Comprehensive Examination

1. On successful completion of the course work, the scholar must take a comprehensive examination in the relevant area of study.
2. In case of failure, a repeat Comprehensive Examination may be given within 6 months.
3. A second failure in the comprehensive examination will result in the cancellation of the registration of the scholar and removal from the rolls.
4. The Comprehensive examination must be cleared by the scholar in a maximum of 5 semesters from joining the Institute, failing which the registration will be cancelled.

Research

Monitoring Progress

1. The Doctoral Committee will make semester-wise assessment of the progress of the research work of the scholar and report to the Dean, Research.

2. The DC may advise the scholar in case of unsatisfactory performance in course work or research.
3. In case of continued lack of progress or initiative on the part of the scholar, the DC may recommend the cancellation of Fellowship or termination of the Registration.
4. The DC is also empowered to recommend to the Dean Research any disciplinary action in case of misconduct or unethical practices.
5. In case of any dispute between the scholar and the guide, the DC may consider it and recommend suitable remedy.

Research Seminars

The scholar has to give at least two research seminars to the department:

The first one, to be given before the end of the fourth semester, will essentially concern with the formulation of the research problem and survey of existing literature.

The second seminar, called the synopsis seminar, will discuss the major findings of the scholar that will go into the thesis. The synopsis seminar will be given just prior to the submission of the Thesis Synopsis to the Dean, Research (see below) and with the approval of the Doctoral Committee.

Both the seminars will be assessed by the Doctoral Committee and will be judged as *satisfactory* or *unsatisfactory*. In the latter case, a suitable course of action will be suggested by the DC.

Thesis Synopsis

The thesis synopsis is a Chapter-wise summary of the thesis. This is prepared after the go ahead from the DC. Each department/school will specify the publication requirements the scholar must satisfy before submission of the synopsis. The Synopsis is presented by the scholar to the Committee consisting of the Dean and the DC members. The synopsis is evaluated by this committee. The committee may propose revisions to the synopsis, in which case, it must be revised and resubmitted.

The accepted synopsis is further processed by the office of the Dean, Research.

Thesis Examination

Selection of Examiners

The following steps are followed by the Dean, Research in processing the accepted synopsis.

1. A panel of two external examiners is confidentially selected by the Dean from a list of a minimum of four possible examiners suggested by the DC, at the synopsis evaluation meeting. The list should contain their contact details.

2. The synopsis is sent to the selected examiners by email and their willingness to examine the thesis is ascertained. If any examiner is unwilling to accept the examinership, or no response is received within a fortnight, another from the list is contacted.
3. The research guide(s) will serve as the third examiner.

Thesis Submission

Two hard and three CD copies of the thesis produced in the prescribed format are to be submitted to the Dean's office within two months of the submission of the synopsis. The thesis is to be forwarded to the Dean by the thesis Guide(s) and the Chairman of the Department/School with due certifications.

Thesis Examiners' Reports

The thesis is sent to all the examiners for evaluation and for their comments on the originality and scientific merit of the findings of the author and to judge whether the work deserves the award of the PhD Degree of IISER-TVM. Specifically they will be asked to give *one* of the following verdicts:

1. *The thesis is acceptable as such without any revision. I recommend the award of the PhD Degree of IISER-TVM to the candidate.*
2. *The thesis is acceptable as such without any revision. I recommend the award of the Ph.D. Degree to the candidate subject to his/her satisfying the Viva Voce Board about the questions/clarifications I have raised in my report.*
3. *The thesis needs revisions along the lines I have suggested in my report. The Ph.D. Degree can be awarded to the candidate after the revisions are made to the satisfaction of the Doctoral Committee. The revised thesis need not be sent to me.*
4. *The thesis needs revisions along the lines I have suggested in my report. I wish to see the revised thesis.*
5. *The thesis is not acceptable for reasons I have given in detail in my report. I do not recommend the award of the Ph.D. Degree of IISER-TVM to the candidate.*

Obtaining Thesis Reports

The following steps are taken by the Dean's office after sending the thesis to the examiners.

- The examiners are reminded of the report every fortnight, after an initial period of 3 weeks.
- Monthly status report of the progress of reviewing is sent to the Chairman of the School/Department.
- If no report is received within 3 months of sending the thesis, a new examiner may be appointed by the Dean.

Further Processing of Thesis Reports

On receipt of both the reports, the Dean convenes the DC to discuss the reports and to take further action. The following guide lines may be observed by the DC in arriving at their decision:

- If the verdicts from the two external examiners are either (1) or (2) , the DC may recommend holding the open Viva Voce Examination.
- If the verdicts from the external examiners are both (5), the Dean, Research may constitute a committee of experts from the institute to recommend further action.
- If one of the verdicts alone is (5), a third examiner may be appointed. If the third report in this case is also (5), the Dean, Research may constitute a committee of experts from the institute to recommend further action.
- Viva voce examination can be held only when two final reports are positive.

Viva Voce Examination

Once two positive reports are received, the Dean approves the holding of the Viva Voce Examination and appoints the Viva Board. The composition of the Board is as follows: Chariman of the Board is the Chairman of the School.

Members consist of : (a) One of the thesis examiners (b) Guide(s) and (c) two members of the IISER faculty with research interest in related areas.

The examiners may seek answers to the questions raised in the thesis reports.

The Chairman reports the result of the Viva Voce examination to the Dean. If the Board declares the candidate to have performed satisfactorily and recommends that PhD Degree be awarded to the candidate, the Dean forwards the recommendation to the Senate of the Institute. The Senate may then recommend the award of the Degree to the Board of Governors.

Copies of the thesis are to be deposited in the Central and School/Departmental Libraries along with an abstract.

Ethical Regulations

The scholar is expected to maintain high ethical standards in his/her conduct and professional work. In particular, he/she is expected to observe the practice of acknowledging the sources of information reproduced in his/her thesis, reports, publications, or seminars. Any instance of plagiarism will attract severe punishment including the cancellation of the registration for Ph.D. or cancellation of the awarded Degree at any time.

The scholar shall sign an honour pledge (Appendix A) and submit it to the Dean, Research at the time of registration. He/she shall also sign the mandatory anti-ragging pledge (Appendix B).

Duration of Ph.D. Program

The minimum and maximum duration of the Ph.D. program are 5 semesters and 10 semesters respectively. At the end of 10 semesters, the registration would be cancelled and any re-registration must have the approval of the Senate.

Residence Requirements

IISER-TVM being a residential institute, all scholars are expected to reside in the institute hostel throughout their course.

Temporary Withdrawal

A scholar may temporarily withdraw from the program on account of health or family circumstances. The withdrawal request is to be forwarded by the DC to the Dean, Research and is to be approved by the Senate.

Fellowship Rules

The following National Research Fellowships are tenable at IISER-TVM:
CSIR-JRF/UGC-JRF/DBT-JRF/UGC/NBHM/INSPIRE
In addition, IISER-TVM offers its own Fellowship .

Continuation of the Fellowship in a subsequent semester is dependent on the satisfactory progress of the scholar's work as reported by the Doctoral Committee at the end of every semester. Fellowship stands automatically terminated at the end of 10 semesters for which the scholar registered.

It is mandatory that every Fellowship holder takes part in Teaching Assistant duties as assigned by the respective School. Such duties include help in teaching laboratories, tutorial sessions in courses, grading assignments, library duties, supervision of computational labs and duties associated with the conduct of Institute interviews and examinations. Such assignments are made by the Chairman of the concerned School.

Leave

Student must submit an application for leave (personal/academic) to the Department Head/Director forwarded by the advisor.

Appendices

A. Honour Pledge

- a. I promise, on my honour, that I will conduct myself in the Institute and outside, with decorum and decency befitting the high moral and ethical standards expected of the members of the National Institute, IISER TVM and follow its rules and regulations
- b. I will not engage in ragging. I understand that ragging is unlawful and liable to prosecution by law enforcement authorities of the State besides any disciplinary action the Institute may take which may include dismissal from the Institute.
- c. I will not engage in overt/covert sexual harassment.
- d. I will not resort to any dishonest practice in examinations/assignments.
- e. I will not engage in plagiarism in my writings and will acknowledge the work of other authors according to international practices.
- d. I understand that violation of this pledge makes me liable to disciplinary action by the Institute.

Sd/-

Student

B. Anti-ragging Pledge

The student and should sign, at the time of admission, the prescribed anti-ragging forms (See website: www.iisertvm.ac.in) as per the stipulation of the MHRD, Govt. of India.

C. Faculty

1. Prof. E. D. Jemmis, Ph.D. (Princeton) FASC, FNA, FTWAS
jemmis@iisertvm.ac.in
Tel: 0471-2597421
2. Prof. M. S. Gopinathan, Ph.D. (IIT Kanpur) FASC, FNA
gopi@iisertvm.ac.in

Tel: 0471-2597428

3. Prof. George Thomas, Ph.D. (University of Kerala), FASc
kgt@iisertvm.ac.in
Tel: 0471-2597425
4. Dr. Ayan Datta, Ph.D. (JNCASR Bangalore)
ayan@iisertvm.ac.in
Tel: 0471-2599417
5. Dr. Kana M. Sureshan, Ph.D. (NCL, Pune)
kms@iisertvm.ac.in
Tel: 0471-2599412
6. Dr. Utpal Manna, Ph.D. (Wyoming)
manna.utpal@iisertvm.ac.in
Tel: 0471-2599414
7. Dr. Tapas Manna, Ph.D. (Bose Institute, Kolkata)
tmanna@iisertvm.ac.in
Tel: 0471-2599425
8. Dr. Anil Shaji, Ph.D. (Texas, Austin)
shaji@iisertvm.ac.in
Tel: 0471-2599422
9. Dr. Mahesh Hariharan, Ph.D. (NIIST)
mahesh@iisertvm.ac.in
Tel: 0471-2599413
10. Dr. Hema Somanathan, Ph.D. (University of Bombay)
hsomanathan@iisertvm.ac.in
Tel: 0471-2599424
11. Dr. Subramaniam Sankaranarayanan, Ph.D. (IUCAA, Pune)
shanki@iisertvm.ac.in
Tel: 0471-2599415
12. Dr. Archana Pai, Ph.D. (IUCAA, Pune)
archana@iisertvm.ac.in
Tel: 0471-2599423

13. Dr. Ramesh Chandra Nath Ph.D. (IIT, Bombay)
rnath@iisertvm.ac.in
Tel: 0471-2599427
14. Dr. Prakash Rajendran Ph.D. (University of Madras)
rprakash@iisertvm.ac.in
Tel: 0471-2599426
15. Dr. Sreedhar B Dutta, Ph.D. (Institute of Mathematical Sciences)
sbdutta@iisertvm.ac.in
Tel: 0471-2599421
16. Dr. Manoj AG Namboothiri Ph.D. (JNCASR,Bangalore)
manoj@iisertvm.ac.in
Tel: 0471-2599401
17. Dr. M. M. Shaijumon, Ph.D. (IIT Madras)
shaiju@iisertvm.ac.in
Tel: 0471-2599402
18. Dr. Rajeev Naveen Chandra Kini, Ph.D. (University of Nottingham, UK)
rajeevkini@iisertvm.ac.in
Tel: 0471-2599404
19. Dr. Joy Mitra, Ph.D. (IISc Bangalore)
j.mitra@iisertvm.ac.in
Tel: 0471-2599403
20. Dr. Sunish Kumar Radhakrishnan, Ph.D.(Pondicherry University)
sunish@iisertvm.ac.in
21. Dr. Ramanathan Natesh, Ph.D. (IISc Bangalore)
Joining August, 2010
22. Dr. Vinesh Vijayan, Ph.D. (University of Gottingen)
Joining August, 2010
23. Dr. Suresh Koduru, Ph.D. (University of Hyderabad)
Joining August, 2010
24. Dr. Kalika Prasad, Ph.D. (IISc Bangalore)
Joining August, 2010

VISITING FACULTY

1. Prof. Unnikrishnan Nayar, Ph.D. (University of Kerala)
nayarvu@iisertvm.ac.in
Tel: 0471-2599416

LABORATORY COORDINATOR

1. O.Thomas
othomas@iisertvm.ac.in
Tel: 0471-2597437

D. Administration

1. Prof. E. D. Jemmis
Director
jemmis@iisertvm.ac.in
Tel: 0471-2597421
2. Secretary to Director
Tel: 0471-2597421
3. Mr. B. K. Subburaman
Registrar/Special Officer
registrar@iisertvm.ac.in
Tel: 0471-2597459
4. Mr. S. B. Jayaram
Consultant, Purchase and Stores
sbjayaram@iisertvm.ac.in
Tel: 0471-2597454
5. Mr. P. N. Mohanan
Consultant, Finance and Accounts
mohanan@iisertvm.ac.in
Tel: 0471-2597422
6. Mr. B. V. Ramesh
Asst. Registrar, Finance and Accounts
ramesh@iisertvm.ac.in
Tel: 0471-2597422

7. **Mr. K. S. G. Kurup**
Manager, Administration
kurup@iisertvm.ac.in
Tel: 0471-2597438

8. **Mr. Gujjuru Muni Bhaskar**
Project Engineer cum Estate Officer
gujjuru@iisertvm.ac.in
Tel: 0471-2597446