NMAM INSTITUTE OF TECHNOLOGY
An Autonomous Institute under VTU Belgaum
(NAAC accredited and all programme are accredited by NBA)

NITTE, KARKALA TALUK, UDUPI DISTRICT- 574110

RULES FOR ADMISSION TO Ph.D DEGREE (Full-time) IN ENGINEERING/TECHNOLOGY/ SCIENCE DURING THE ACADEMIC YEAR 2017-18

1. GENERAL :

- The competent authority for admissions to all the Doctoral programmes shall be the Principal of the Institution

- All the Ph.D programmes are run by the autonomous institute NMAM Institute of Technology, Nitte, in research centers approved by Visvesvaraya Technological University, Belgaum.

- All the Ph.D. Programmes shall be governed by the rules and regulations framed by the autonomous institute and Visvesvaraya Technological University, Belgaum.

2. ADMISSION TO Ph.D PROGRAMMES :

2.1 Seats available:

The details of the research guides, their broad research area and number of seats available are given below:

Sl.No	Department/ Research Centre	Name of the Guide	Broad Area of Research	Seats Available
1.	Computer Science and Engineering	Dr. Uday Kumar Reddy	Graph Algorithms, Data Mining and Machine Learning.	01
		Dr. Javed	Image Processing, Pattern Recognition, Computer Vision, Machine Learning and Data Compression	01
		Dr.D.K.Sreekantha	IOT, Soft Computing, Expert Systems, Neural Networks, Machine Learning/Deep Learning, BIG Data, Risk Managment etc in Agriculture, Healthcare, Smart City etc applications	01

				01
2.	Mathematics	Dr. Shashirekha B. Rai	Lattice Theory - Study of some ordered structures through algebraic approach.	01
3.	Biotechnology	Dr. Vidya S M	Targeted drug delivery using gold nanoparticels	01
4.	Electronics and communication Engineering	Dr. Ashish Singh	Microstrip Patch Antenna, Millimeter Waves, and Optical Communication	01
		Dr. K.V.S.S.S.S.Sairam	Optical Communication, Optical Networking, Switching and Routing Domains.	01

The admission of candidates to Ph.D programmes depends on the willingness of the candidate and the guide to work in the corresponding research areas.

2.2. Eligibility for Admission:

A candidate can apply for admission to Ph.D programme if he/she satisfies the following conditions provided he/she has not registered for Ph.D or any other course at any other institute/ university.

A) Passed Bachelor's and Master's degree examination in appropriate discipline of Engg. /Technology from any recognized university (for Sl.No. 1,3, and 4 in the above table). The candidate should have scored atleast a first class on the aggregate at bachelor's and master's level.

B) Passed Bachelor's and Master's degree examination in appropriate discipline of science of any recognized university (for Sl.No.02). The candidate must have at least a second class on the aggregate at the bachelor's degree and at least 65% on the aggregate at master's level.

C) Additionally, all candidates must satisfy the Ph.D eligibility criteria of VTU, Belgaum (See Appendix)

2.3 Admission / Selection Procedure:

The desirous candidates are required to apply for admission to Ph.D program in the prescribed format made available in the website (www.nmamit.nitte.edu.in) with all the necessary documents and a demand draft for Rs. 500/- drawn in favour of Principal, NMAMIT, Nitte. The candidates who satisfy the eligibility criteria of NMAM Institute of Technology, Nitte and VTU Belgavi, must appear for an interview at 10 AM on 10/07/2017. The filled – in application form should be submitted to Dean (R&D), NMAMIT, Nitte-574110, Karkala Taluk, Udupi District, on or before **30/06/2017.**

The candidates who are eventually selected for full time Ph.D at NMAMIT, Nitte, are expected to also go through selection process of VTU, Belgaum and shall abide by Ph.D regulations of VTU, Belgaum (See www.vtu.ac.in).

2.4 Stipend /Scholarship:

Teaching and Research Assistantship will be provided to all full time Ph.D Students. They are entitled to receive an amount of fellowship of Rs. 18000/- per month for first and second year, while the candidates are entitled to receive amount of fellowship of Rs. 20000/ for the third year.

Only under special circumstances, based on the recommendations of the Doctoral Research Committee (DRC) assigned to the candidate, an extension of one year duration may be given. The payment of fellowship will begin from the time the candidate is taken into the rolls of the institute (generally in the month of Jan)

3 FEES :

The fees are to be paid in full every year as per the norms established by VTU, Belgaum.

4 OTHER REQUIREMENTS:

(i) The candidates working for full-time Ph.D are expected to stay in the accommodation (hostel or quarters) that will be provided by the institute at nominal rent.

(ii) The candidates selected for Ph.D Programme are expected to handle some teaching load as part of teaching assistantship.

(iii) If any of the statement made in application form or any information supplied by the candidate in connection with his/her admission is later on, at any time, found to be false or incorrect, his/her admission will be cancelled, fees forfeited and the fellowship discontinued.

(iv) All the candidates registered for doctoral degree should note that violation of any copy right /patent right/IPR or duplication of any work during the Ph.D. work is liable for prosecution and will be expelled from the institute immediately.

(v) The selected Ph.D candidates will have review meeting every six months with Doctoral Research Committee (DRC), where the scholar is expected to make a presentation.
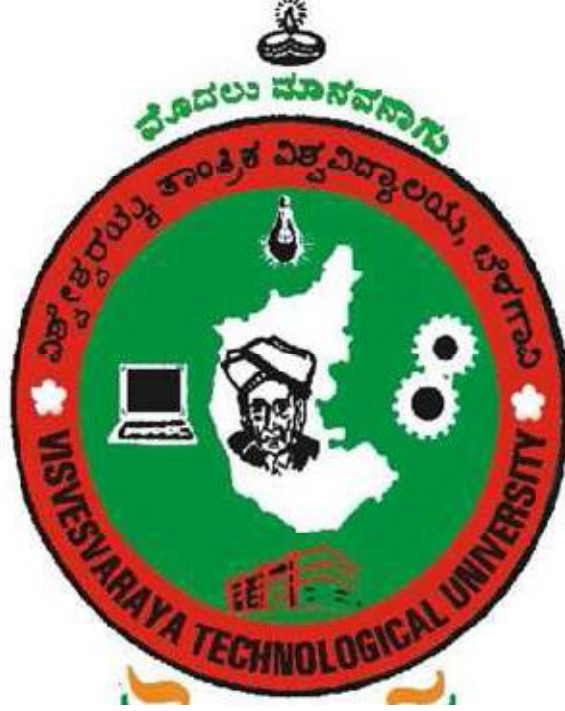
Contact Details:

Dean (R&D)
NMAM Institute of Technology,
Karkala Taluk, Udupi District - 574110
Phone: 0825828164(321)
Fax: 08258281265
Email: sudeshkekal@nitte.edu.in

Principal
Nitte NMAM Institute of Technology, Nitte
Karkala Taluk, Udupi District - 574110
Phone: 0825828164(321)
Fax: 08258281265
Email: Principal_nmamit@nitte.edu.in

Appendix A

GUIDELINES
ON
RESEARCH PROGRAMMES AT VTU

(Based on Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D.)-2011)

DOCTOR OF PHILOSOPHY (Ph.D.)

*MASTER OF SCIENCE IN ENGINEERING
[M.Sc. (Engg)]*

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
"Jnana Sangama", Belgavi – 590 018
Karnataka, India

ELIGIBILITY FOR ADMISSION

1. The minimum qualification to be satisfied by the candidates seeking admission to PhD Programmes shall be as per Section PHD 5.2 of Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D.)-2011.

2. The candidates shall qualify in the ULRAT Conducted by the University. However,mere clearance of ULRAT is not a guarantee for registration.

3. The candidates who have acquired M.Tech./M.Sc. degree through Distance mode shall not be eligible for admission.

Recognition of Supervisors

Candidates aspiring to register for the Research Programme are required to apply through eligible supervisors as per Section PHD -6.1.2. of Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D.)-2011.Faculty members working in VTU affiliated Academic Institutions and Scientists/Engineers working in VTU recognized Research Centres, satisfying the Clause PHD-6.1.2 of Regulations(Amended) Governing the Degree of Doctor of Philosophy (Ph.D.)-2011 shall be eligible forrecognition. The said Clause lays down the following criteria:

1. Ph.D. degree from a recognized University in the relevant discipline(s).
2. A minimum of two publications in refereed journals during the preceding five years and,

3. Independent research experience of at least one academic year, after obtaining the provisional Ph.D. degree award.

Further, Faculty Members/Scientists working in Institutions not affiliated to VTU or ResearchEstablishments/Industries, not recognized by VTU as Research Centres, shall be from the*Recognized Panel of Supervisors* by VTU which shall be uploaded in the website from time totime.

ADMISSION PROCEDURE

1. **Application**: An aspiring candidate is required to fill the form of application in full along with all the supporting documents mentioned therein and send the same so as to reach the Registrar on or before the last date of submission.

2. **Screening of Applications for Eligibility to take ULRAT:** All the applications will be reviewed by the Admission Committee to ascertain the eligibility of *Candidate and the Supervisor.* Thereafter, the List of candidates eligible for ULRAT under various Faculties will be displayed on the Website along with the generated Enrolment Numbers.

3. **Conduct of ULRAT**: ULRAT will be conducted for a total of 100 Marks consisting of objective type questions. List of successful candidates in ULRAT will be displayed on the Website with instructions to prepare for the Pre-Registration interview.

4. **Pre-Registration Interview**: The Expert Committee shall conduct the Pre-Registration interview at VTU Head Quarters, Belgaum. Expert Committee shall evaluate the candidates for their research potential. Then the List of successful candidates for provisional registration shall be displayed on the Website with further instructions.

OTHER DETAILS ULRAT

All the eligible candidates shall appear for the ULRAT (UNIVERSITY LEVEL RESEARCHAPTITUDE TEST) which shall be conducted by the University **once in a year** as per the ClausePHD-10 of Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D.)-2011.

Admit cards for appearing at ULRAT shall be sent by the university through post/email to the candidates 10 days before the Test. Candidates who do not receive the Admit Card may Communicate the same to the University Via: Fax: 0831-2405467, Phone: 0831-2498100/127 at least 3 days before the date of ULRAT.

QUESTION PAPER PATTERN FOR ULRAT

ULRAT shall be conducted in all the faculties separately for a total of 100 Marks. The Question paper shall include objective type questions with multiple options as per the composition given below:

General Aptitude : 20 Marks
Quantitative Aptitude : 30 Marks
Subject Aptitude : 50 Marks **:**   **Total : 100 Marks**

A model Question paper shall be made available on the University website

ULRAT ADMISSION NUMBER

Candidates satisfying academic eligibility criteria shall be assigned ULRAT Seat Number. This number which is different from the Application Number shall continue till the registration is University Seat Number (USN) for each candidate.

VALIDITY OF ULRAT CARD

ULRAT Result Cards shall be issued to all the successful candidates. The validity of the same shall be TWO academic years from the qualifying year.

EXEMPTION FROM APPEARING AT ULRAT

The following categories of candidates are exempted from the ULRAT as per the Clause PHD-

10.2 of Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D.)-2011. :

> 1. Full Time (Special) candidates. (Foreign candidates belonging to NRI/FN/PIO categories)
> 2. Candidates qualified in UGC / UGC-CSIR JRF / SLET / CAT / GATE / NET or other National Test with valid score.
> 3. Candidates with M. Phil. Degree or equivalent as recognized by the University.

Note: However, the candidates claiming exemption under the above categories shall also submit the ULRAT Application Form duly filled in.

PRE-REGISTRATION INTERVIEW

Candidates who are successful in the ULRAT and all those exempted from ULRAT as per the Clause PHD 5.2 of Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D.)-2011 shall be eligible to appear for the Pre-Registration Interview provided they satisfy all other conditions such as eligibility criteria of the Supervisor, Subject compatibility etc. Pre- Registration Interview involves objective presentation of the proposed research work by the candidate which may consist of Objectives of the work with Justification, Methodology to be followed, Facilities available at the Research Centre/Parent Institution and the Expected out come. 10-15 minutes will be generally given to each candidate. The Interview marks shall be 50.

Merit list of the candidates under their chosen Supervisor shall be prepared on the basis of ULRAT performance, Pre-Registration Interview and the available vacancies.

COURSE WORK

Candidates in consultation with the Supervisor are required to finalise the list of prescribed number of courses (Refer the Table given below). Individual courses for the course work shall be selected from different groups in such a way that there shall be a minimum of one course, but not more than two courses from any group.

Prescribed Number of Courses	Number of Courses to be taken for PhD
Candidates with PG qualification in Faculty of Engineering /Arch/MBA/MCA	04
Candidates with PG qualification in Faculty of Science	06
Candidates with M. Phil. Degree from On-campus Programme in Faculty of Science	04
Candidates with M.Phil. Degree from Distance Mode Programme in Faculty of Science	06
Candidates with UG qualification in Faculty of Engineering (other conditions apply as per PHD-5.2 of Regulations (Amended)Governing the Degree of Doctor of Philosophy (Ph.D.)-2011)	08

Note: For Candidates registering for MSc (Engg.) by Research, six Courses are prescribed.

APPLICATION FORMS
1. The application for admission shall be in the prescribed format of the University for the particular academic year only.
2. Application shall be downloaded from the website www.vtu.ac.in

INSTRUCTIONS FOR FILLING THE APPLICATION FORM

(i) Peruse the Application Form, Regulations and this Handbook thoroughly before filling the Application Form.

(ii) Check your eligibility in terms of academic qualification for the Research Stream you are applying for.

(iii) A recent passport size Photograph wherever asked, should be signed by the candidate and be duly attested by the Head of the Institution.

Make sure you enclose the following documents along with the Application Form

Applications not supported by necessary and adequate documents are liable to be rejected. Hence candidates are advised to take due care while filling the Application Form.

For each Application, Attach attested copies of the following:
1. **Detailed Bio-data** of the Candidate, Supervisor. (and Co-Supervisor, if applicable)
2. UG and PG **Degree Certificates** and **Marks cards** of the **Candidate.**
3. UG, PG and PhD **Degree Certificates** of the **Supervisor/Co -Supervisor.**
4. **Category certificate of candidates** belonging to SC/ST/Cat-I/ and any other, if applicable.
5. **Additional Certificates** supporting the claims (if any):
   - Medical Certificate for the degree of disability in support of candidates claiming benifit.
   - Test Score Card along with Admission ticket in support of clearance of UGC/UGC-CSIR JRF/SLET/CAT/GATE/NET or any other National Test with valid score.
   - In case candidate/Supervisors are possessing degree from Foreign Universities, the Equivalence Certificate issued by the Association of Indian Universities (AIU).
   - Passport with student Visa in the case of foreign candidates.

6. **Synopsis of the proposed research:** Synopsis shall comprise of,

   - Introduction with problem identification
   - Literature survey
   - Objective
   - Methodology
   - Possible outcome
   - References.

It shall be in A4 size Bond paper, neatly typed in double line space, in not more than 10 pages.

   Page Layout of the Synopsis should be
   - 1 inch margin on all the sides and printed only on one side.

   - Cover page should contain only the TITLE and Name of candidate and Supervisor(s) in Times New Roman Font 16 Bold. 14 Bold fonts to be used for Headings, 12 bold for Sub-headings and 12 normal for Text.

Note: Synopsis to be in a Booklet form by using a simple Stapler and Cellotape.

7. **Syllabus of the Course work chosen for the present Research**: Applicable only for Faculty of Science and PB-4 Course of the Faculty of Management.

8. **Demand Draft of `.500** drawn in favour of The Finance Officer, VTU, Belgaum towards Application and Processing fee.

RESEARCH CENTRES OF VTU

To cater to the needs of research aspirations of eligible candidates irrespective of their affiliation, VTU has been pursuing a scheme for according the status of Research Centers in two different formats as given below:
    1. VTU Research Centres (VTU-RC) Recognised Research Centres in affiliated Colleges, R&D Establishments/ Industries and laboratories.

    2. VTU Research Resource Centres (VTU-RRC)

1. VTU RESEARCH CENTRES (VTU-RC)

Research Centers are recognised by Visvesvaraya Technological University for the purpose of permitting the Centers to guide candidates for M.Sc. (Engg.) by Research / Ph.D. degrees. Departments of Institutions affiliated to Visvesvaraya Technological University, Research & Development laboratories attached to Industries and such other laboratories of Research Institutions have been recognized as Research Centers on satisfying the requirements as per Regulations and has facilities as required by the University to conduct research in the relevant fields.

1. Candidates irrespective of their affiliation may apply in the prescribed format to the University seeking registration to M.Sc.(Engg) by research/ Ph.D., programmes in any recognised Research Centre located in VTU affiliated Colleges/ R&D laboratories of Industries and other VTU recognised Laboratories.

2. A Supervisor / Co-Supervisor depending on his seniority after obtaining PhD can have five Research Scholars working under him/her for M.Sc.(Engg) by Research / PhD Programme taken together, registered under VTU or any other University. In addition to the above, the Supervisor can also have 3 Scholars from the Reserved Categories as per the Clause PHD-7.1 of Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D.)-2011 . The actual number permitted shall be decided by the Research Admission Committee based on the facilities at the Research Centre, performance of the Supervisor and progress of the Research Scholars registered under him/her, but in any case not exceeding eight as stated above.

VTU RESEARCH RESOURCE CENTRES (VTU- RRC)

VTU Research Resource Centre is an innovative research entity of VTU envisaged to pool the talent of eligible Research Supervisors outside the VTU System for the academic Progress. PhD degree holders working in private/government organizations

are encouraged to register themselves as supervisors to Supervise MSc(Engg)/PhD candidates. Presently all the four Regional centres are recognized Research resource Centres of VTU.

1. Candidates irrespective of their affiliation and applying for seeking registration to MSc (Engg) by Research/PhD Programmes in other than VTU-RC, may apply to VTURRC through a recognized Supervisor of VTU-RRC.

2. The candidate has to opt for a Co-supervisor working in any VTU affiliated Institution along with the Supervisor from Non-VTU organizations.

3. Age of the supervisor shall be less than or equal to 62 years as on the date of Admission Notification issued by the University.

Key Words and Abbreviations

Ph.D.: Doctor of Philosophy

Pre-PhD Interview: Selection Interview conducted by the Expert Committee after the clearance of ULRAT

ULRAT: University Level Research Aptitude Test

VTU: Visvesvaraya Technological University

VTU-RC: Visvesvaraya Technological University Research Centres. These are the VTU recognised Departments of Institutions affiliated to Visvesvaraya Technological

University, Research & Development laboratories attached to Industries and such other laboratories of Research Institutions.

VTU-RRC: Visvesvaraya Technological University Research Resource Centre. This is a research entity of VTU where aspiring candidates may apply for registration to M.Sc(Engg) by Research/Ph.D Programmes through a Supervisor recognized by the University.