

Bansilal Ramnath Agarwal Charitable Trust's

**Vishwakarma Institute of Information Technology,
Pune**

**VISHWAKARMA
INSTITUTES**

VI

**Information Brochure for Admission to
Ph.D. Programme**

Year: 2021-22

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1. The Institute:

Vishwakarma Institute of Information Technology is a private leading premiere institute engaged in imparting quality education in the field of engineering and Technology. The institute is run by Bansilal Ramnath Agarwal Charitable Trust, Pune. The institute is established in the year 2002 with a vision of achieving excellence in Engineering Education. The institute has received A grade accreditation by National Assessment and Accreditation Council (NAAC).

The institute runs following Undergraduate Courses in Engineering and Technology.

Sr. No	Name of the Department	Intake	Year of Start
1	Electronics and Telecommunication Engineering	180	2002
2	Computer Engineering	240	2002
3	Information Technology	180	2002
4	Mechanical Engineering	180	2007
5	Civil Engineering	180	2008
6	Artificial Intelligence and Data Science	120	2020

All the Under Graduate programs are accredited by National Board of Accreditation from July 2018 to June 2021.

The institute also runs the following post graduate courses:

- 1) M. Tech (Civil Engineering- Water Resources and Environmental Engineering)
- 2) M. Tech (Civil Engineering-Structural Engineering)
- 3) M. Tech (Electronics and Telecommunication Engineering-Signal Processing)
- 4) M. Tech (Computer Engineering)
- 5) M. Tech (Mechanical Engineering-Design Engineering)

The institute also runs the Ph.D programs in following disciplines under the Ph.D centre approved by Savitribai Phule Pune University, Pune:

- 1) Ph. D in Civil Engineering
- 2) Ph.D in Electronics and Telecommunication Engineering
- 3) Ph.D. in Mechanical Engineering
- 4) Ph.D in Computer Engineering

2. Research Facilities:

All Departments of the Institute are well-equipped with experimental and computational facilities. In addition, there are few central facilities, which include Computer Centre, Central Library and Workshop. The Central library is enriched with sufficient quantity of technical books, journals, reference volumes etc. that are required for learning and teaching of all disciplines. Central library gives support to the educational & research programs of the Institute by providing physical & intellectual access to information. It consists of Reference Section, Journal Section, Reading Hall, Digital library section, Multimedia Facility, Stack-Room etc. The library has unique collection of Encyclopaedia, Handbooks, Textbooks, Journals, and CDs etc. The library has subscribed around 630 international journals and 470 national journals.

3. Ph.D. programmes:

The Institute offers research programmes leading to Ph.D. degree in Civil Engineering, Electronics and Telecommunication Engineering, Mechanical Engineering and Computer Engineering. The broad objective of the program is to offer research training to the candidates so that they can tackle the complex engineering problems and provide technically and economically viable solution to these problems.

The Institute offers programme of minimum three years for the full time candidates and part time candidates. The maximum period allowed for full time candidates and part time external candidates is seven years.

Every stream of the programme will have a curriculum and syllabus of the courses approved by the Academic Board. The research scholars have to earn 16 credit requirements by taking theory courses and / or delivering credit seminars in first two semesters. The continuation in the Ph.D. programme will be subjected to fulfillment of these initial course credit requirements.

4. Eligibility Criterion for Admission

For admission to the Ph.D. programme, applicants fulfilling any of the following criteria shall be treated as eligible:

- A) Persons having passed Post Graduate Degree (Master Degree) Examination with at least 55% marks or equivalent Grade Point Average (GPA) as per UGC / AICTE 10 point grading system or any other system accepted by AICTE / UGC / AIU for equivalent for grades /award of class.
Persons having passed Post Graduate Degree (Master Degree) Examination with at least 55% marks will be condition for getting scholarship of fellowship as per norm of B+ as stated by UGC.

5 % relaxation in the required percentage of marks will be given to the students of State of Maharashtra belonging to SC/ST/DT/NT/SBC/OBC categories.

Persons working in National Laboratories/Institutes/Government/Private Organization nominated/sponsored by the respective employer. These persons should have a Post Graduate Degree with 55 % or equivalent and holding a rank of Assistant Director or above or equivalent as per the norms of Govt. of Maharashtra, and UGC.

Above mentioned rules will also be applicable to the foreign candidates who have obtained a Master's Degree from any of the recognized Indian Universities. Admissions of foreign candidates has to be approved by International centre of affiliating university, SPPU, Pune

- B) Persons with exceptional abilities having passed graduate degree examination with 50% of marks and with 15 years' experience after graduation in the related field. However, candidates possessing B.E. / B. Tech. Degree in the faculty of Engineering / Science and Technology shall also have patents/ intellectual property rights registered in their names. In such cases, exceptional abilities will be decided by the Research and Recognition Committee of the institute and approved by Savitribai Phule Pune University, Pune.
- C) Senior citizen of an age of 60 years and above, with a Master's Degree. In exceptional cases, the eligibility for senior citizen shall be at the discretion of the Director of the Institute.
- D) A Graduate in any Faculty who has developed important new technology (new for the country) or designed and fabricated special instruments or apparatus which are deemed by a competent judge to be a valuable contribution in the field of Engineering/Pharmacy, may be permitted by the Research and Recognition Committee of the Faculty concerned, on the recommendation of appropriate Board or Boards of Studies to submit his thesis for the Ph.D. Degree in that Faculty. Such a candidate must have at least 5 years' standing as a Bachelor of the Engg. / Technology.
- E) Percentage of marks required for admission of foreign candidates (those who have not obtained Master's degree from Indian Universities) will be 50% or equivalent GPA at Master's Degree level. In this case the, University must be recognised by Association of Indian Universities (AIU).

All rules and regulations laid down by SPPU, Pune, UGC and AICTE are governing rules and supersede in case of any ambiguity.

5. Admission Procedure

Admission is offered to the candidate on the basis of his/her performance in Ph.D entrance Test (PET) and in an interview held before the commencement of the semester for which admission is sought. The admissions to the Ph. D program also depend upon the vacancies available with research guides in the discipline where the admission is sought.

All candidates who have cleared PET from SPPU, Pune or other State Funded Universities with valid score can directly appear for the Interview. However the student must apply for admission at the time of declaration of the entrance examination scheduled by the Institute.

Ph.D Entrance Test (PET):

Entrance Examination will be normally conducted twice a year

Alternately one entrance examination shall be conducted and during alternate semester, vacancies shall be declared and filled through an advertisement from eligible candidates through entrance examination / exemptions in two admission cycles consecutively. Appearing for entrance examination is equally applicable for Foreign Students also. The PET will be conducted either in ONLINE (PROCTORED) and/or OFFLINE mode.

A) Exemption for Entrance Examination

The candidates fulfilling at least one of the following conditions will be exempted from Entrance Examination:

1. Qualified in GATE (valid score*) /GPAT (valid score*)/ SET/NET/JRF/SRF examination of the apex bodies as CSIR/UGC/ICAR/ICMR/DBT and DST Inspire fellowship only; M.Phil. Degree in a relevant subject completed from any Recognized University; Minimum experience of 5 years as an approved teacher of Savitribai Phule Pune University/ other State Universities in affiliated college/recognized institution/University Department/teachers selected through MPSC or Similar Selection Board with 5 years of experience
2. Senior citizen of an age of 60 years and above with Master's degree;
3. Candidates such as Advocates/Doctors/Artist/Industry Professional/Employees of Government, Semi -Government Organisations fulfilling conditions prescribed above.
4. Time to time addition/ deletion / modification by SPPU / UGC / AICTE

Note: Candidates entitled for exemption from the Entrance Examination shall submit the Registration Form along with relevant supporting documents within the stipulated period before the date of interview.

B) Structure for Entrance Examination:

The PET (Ph.D Entrance Test) for the faculty of Engineering and Technology will be based on two papers. Paper 1 will be based on the following:

Section I A) Research Methodology

Section I B) Mathematics for Engineers

Section I C) Computer Fundamentals

and Paper 2 will be based on subject specific contents.

Paper 1 and Paper 2 will carry the weightage of 100 marks each and the candidates securing equal or more than 50% marks for Open category and 45 % Marks for SC/ST/DT/NT/SBC/OBC/EWS will be shortlisted for the interview.

The students shortlisted from PET will be required to appear for the interview before the panel of members.

C) Allotment of Research Guide

Allotment of Research Guide will be done by the respective Departments as per the following guidelines:

1. Guide-wise quota will be declared before announcement of PET. Reservation policy will be observed at the time of allotment. The reservation will be followed as per guide basis (e.g. out of eight vacancies, four should be open and four should be reserved category)

On the basis of the interview, allotment of Research Guides for selected candidates will be decided by the Research Centre in a formal manner depending on the number of candidates per faculty, the available specialization among the Research Guides and the research interest as indicated during interview by the candidates.

The allotment/allocation of Research Guide will not be left to the individual candidate or guide. Guide-wise quota will be declared. Reservation policy will be observed at the time of allotment. The reservation will be followed as per guide basis e.g. (out of eight vacancies, four should be open and four should be reserved category)

While granting admission to candidates to Ph.D. programmes, the Research Centres will follow the State Reservation Policy. Foreign candidates will be treated at par with Open Category for admission.

Only one foreign student at a time (i.e. when one foreign national candidate is in progress, no other candidate can be admitted) will be permitted per guide.

The Director of the institute in the capacity of Head of the Research Centre will ensure the allotment of guide(s) within 3 months from the date of selection of the candidates.

D) Application:

Every person, if he/she is otherwise eligible and qualifies as per above conditions and is desirous of doing research work for the Ph.D. degree shall face the interview before the Committee constituted for the purpose. All such candidates will apply to the institute for registration for the purpose of interview. Candidates exempted from Entrance Examination as per the section 5 (A) shall also have to register their candidature with the institute. Candidates will be interviewed by the Committee constituted for the purpose as per the section 5 (E) below.

E) The Committee shall consist of:

- 1) Director of the institute (Chairman):
- 2) Dean (Academics)
- 3) Dean (Research & Development)
- 4) Head of the Department/ Chairman of Board of Studies concerned or his nominee;
- 5) Two nominees of the Vice-Chancellor - One General and One Reservation - appointed by SPPU, Pune
- 6) Two subject Experts (as approved by SPPU, Pune);
- 7) In Charge/Coordinator of Research Centre

6. Registration and Confirmation of Registration for the Ph.D. Degree (Topic Approval)

i) An eligible applicant seeking admission to the Ph.D. programme shall apply to the Dean (R&D), in the prescribed Application Form along with the registration fee as may be prescribed from time to time, ordinarily within a period of **THREE** months from the date of allotment of the Research Guide.

ii) The applicant shall submit along with the application **FOUR** copies of his/her Ph.D. proposal as per the Guidelines to the Dean (R&D).

iii) An eligible applicant shall be required to make a brief presentation at the Department or designated place by the institute for the purpose, before a Committee constituted as under:

- 1) Director (Chairperson)
- 2) Research Guide
- 3) Two experts (recognized research guides in the subject concerned, one from outside the Department)
- 4) One subject expert from other institute, preferably from institute of repute in India or abroad.

The presentation will be arranged by the Program Department on the basis of consent of guide and committee.

After satisfactory presentation, the Committee will prepare a report on the basis of the presentation. In case of any suggestions given by the Committee for improvement of topic, the candidate shall make changes accordingly and present the topic again before the said Committee within 3 months of the earlier presentation.

After successful presentation, the proposal shall be placed before the Research and Recognition Committee. The date of the successful presentation shall be treated as the date of provisional admission of the candidate and the candidate shall be given provisional admission/registration letter.

In case of any dispute/problem, the Director shall take an appropriate decision.

iv) If the presentation is unsatisfactory, the proposal shall be rejected and the applicant shall be required to submit a fresh proposal and make a presentation again after a gap of one month and before six months from the date of earlier presentation.

v) The Research and Recognition Committee shall consider approval of the topic of research and appoint, in case of inter-disciplinary subjects, co-guide/s recognized by the Institute or, in special circumstances, by any other recognized University / Institute / Industry.

vi) The date of registration shall be the date of provisional admission. The registration shall be valid for six years. Extension up to a maximum period of two years shall be given by the Research and Recognition Committee/s concerned only if considerable work has been done by the candidate. Over and above extensions and grant of leave from Ph.D. duration is as per UGC guidelines time to time.

vii) The candidate concerned must submit the application for extension through his guide and Dean R&D to the Director, three months before the expiry of the registration period. Further extension of one / two year will be given by Director on the recommendation of the Dean R&D.

viii) If the candidate desires, he/she can partially modify the title and the proposed plan of the research. The Research and Recognition Committee concerned shall approve such changes on the recommendation of the guide and Dean R&D.

ix) As per provisions of Ordinance 116 of the affiliating university SPPU, registered candidates shall not be allowed to register simultaneously for any other full time degree course.

x) The admission will be confirmed after the Research and Recognition Committee approves the topic.

7. Course Work:

Admitted candidates shall be required to undertake course work organized by the Department. The course work will be for a minimum period of one semester. The course work shall be treated as pre-Ph.D. preparation.

If found necessary, course work may be carried out by doctoral candidates in related departments/institutes either within or outside the University, for which credit points shall be allotted as per rules.

The course work is compulsory and will carry 16 credits. In addition to mandatory subjects provided by UGC time to time. The distribution of these credits is as under:

Five 4 credits for Research Methodology which includes research methodology, quantitative methods, computer application, tools and techniques including instrumentation, communication skills, seminar presentation and review of published research.

8 credits for subject specific (2 subjects) course work as per the research guide / Department.

1 credit for Writing of Research Proposal for obtaining Financial assistance from national funding agencies

1 credit for Writing of Review

2 credits for seminar

One subject out of 2 department specific subjects can be opted from online (course or combination of courses to get 04 credits) through SWAYM / NPTEL or any such recognised course by AICTE / UGC for the purpose and these credits shall be counted towards the course.

The evaluation will be done by the faculty of the concerned Department or as appointed by Director, through process of the appointments of examiners as per rules of the institute and affiliating university.

8. Supervision:

(A) Guide

- 1) Normally a candidate shall be required to complete his/her doctoral research under the supervision of the guide allotted to him/her. However, the Research and Recognition Committee concerned may allow change of guide on the production of a 'No Objection Certificate' from the first guide and an acceptance letter from the new guide.

In case of such a change, the candidate shall work for a minimum period of one calendar year under the new guide before he/she submits the thesis. A 'No Objection Certificate' will not be required if the candidate justifies the non-availability of his guide.

The justification will have to be endorsed by the Dean R&D. In case of any dispute/problem, non-availability of the guide, the Director of the institute, on recommendation of the Dean of the Faculty concerned, will take an appropriate decision.

- 2) At any given time, a Professor shall not have more than eight registered Ph.D. candidates working under his/her supervision. Associate professor shall not have more than six registered Ph.D. candidates working under his/her supervision. Assistant Professor shall not have more than four registered Ph.D. candidates working under his/her supervision.
- 3) In case of a dispute between a candidate and his guide, the Committee consisting of the following shall examine the matter and report to the Director, whose decision shall be final.

- i. Dean Academics [Convenor];

ii. Faculty nominated by the Director;

iii. Dean (R&D)

iii. The Head of the department

[If the complaint is against Head/the Dean, he/she shall not participate in the proceedings of the meeting, if the complaint is against the person holding the position. In that case, additional member/s may be appointed by the Director to replace them.].

The report shall be submitted to the Director including among other things, specific recommendations.

(B) Progress:

- 1) All the registered candidates shall be required to submit to the Dean R&D, through their research guides, elaborate progress report every six months.

If a candidate fails to submit three reports consecutively, his/her registration may be treated as cancelled on recommendation of Head of the department and Dean Research and Development.

- 2) The progress reports submitted shall be placed by the Head of the Department before the Progress Monitoring Committee consisting of [a] Dean Academics [b] the Research Guide [c] research guide recommended by Dean R&D from amongst the recognized research guides of the Institute and d) One subject expert from the institute of repute.

The Committee shall scrutinize the progress reports and prepare a brief statement on the progress of the candidate. In case of dispute, the Director shall take final decision. The Head of Department shall maintain the record of these reports and statements.

9. Submission of Thesis and Award of Degree

A. Submission of Thesis

1. The submission of synopsis may be permitted only after completion of **three years** from the date of provisional registration including period of the Course Work. The synopsis should contain introduction, chapter-wise brief account of the work done and overall conclusions.

Ph.D. candidate has to publish one research paper in a standard refereed journal (**as per the list of UGC, Indexed in SCI/SCOPUS/Web of Science**) valid during the course of Ph.D. before the submission of the thesis /monograph for adjudication, and produce evidence for the same in the form of acceptance letter or the reprint.

2. At least One month before the date of submission of the thesis, each candidate shall give a pre-submission seminar (Synopsis) to be arranged by the Head of the department on the request of the candidate duly endorsed by the guide. The final plan of the thesis will be discussed by the candidate before a progress monitoring committee. The Synopsis is open for all the Research Scholars of the institute.

3. In the light of the discussion during the Synopsis, the candidate shall submit to the Dean (R&D) **five copies** of the synopsis of his/her thesis through his/her guide within one month from the date of presentation of seminar. The guide may recommend list of referees to the Director.

4. The candidate shall be allowed to submit his/her thesis after the completion of a **period of two months and before six months from the date of submission of the synopsis**. Late submission of thesis shall be allowed up to the completion of one year from the date of submission of the synopsis or till the expiry of the registration period whichever is earlier.

5. The thesis shall be submitted in compact bound form along with a soft copy. Five copies of the abstract shall be submitted along with the thesis.

The final thesis shall be presented in accordance with the following specifications:

- A. The paper used for printing shall be of A4 size;
- B. Printing shall be in a standardized form on one or both sides of the paper and in 1.5 line spacing;
- C. A margin of 1.5 inches shall be kept on the left hand side;
- D. The card for cover shall not be more than 330 GSM;
- E. The title of the thesis, name of the candidate, degree, name of the guide, place of research and the month and year of submission shall be printed on the title page and the front cover)
- F. The hard-bound thesis cover shall be of black colour. Spine of the binding [side cover should mention 'Ph.D. thesis' on the top, name of the candidate and month and year.

6. The thesis shall include a Certificate of the guide and a Declaration by the candidate that the work reported in the thesis has been carried out by the candidate himself/herself and that the material from other sources, if any, is duly acknowledged.

7. The thesis shall be written in English only.

B. Appointment of Examiners

1. The procedure for the appointment of examiners shall be undertaken soon after the candidate submits his/her synopsis.

2. The thesis should be sent to three external examiners and evaluated by any two examiners: one examiner from India and one should be from outside India.

3. If the approval of the examiners' panel is delayed beyond three months, the Ph.D. candidate, through his guide may bring this to the attention of the Director directly who, in such a case, may initiate an appropriate action in consultation with the Dean of the Faculty concerned ensuring that the panel is approved within a month.

4. The Chairman for the Viva-Voce and the Panel for defence of the thesis shall be appointed by the Director from a panel of three experts suggested by the guide. The panel shall include minimum one examiner to whom thesis was sent for an evaluation. The guide of the candidate shall act as an internal examiner.

C. Evaluation

1. After the approval of the panel of examiners by Board of Examinations, the Controller of Examinations shall invite the first three examiners from the approved panel, to examine the thesis. The Controller of Examinations shall forward the thesis to the examiners within a week from the date of the receipt of the acceptance letter of the examiner or the submission of thesis, whichever is later. If an examiner does not accept the invitation within thirty days from the date of dispatch of the invitation letter, the Controller of Examination shall send an invitation letter to the next examiner on the panel.

2. The external examiners shall independently send their reports to the Controller of Examinations within sixty days from the date of receipt of the thesis. If an examiner fails to do so, the Controller of Examinations shall send him/her a reminder immediately after the expiry of the said period and request him/her to submit the report within thirty days. If the examiner concerned fails to comply even within the extended period, the COE shall cancel his appointment forthwith and invite the next examiner from the approved panel to evaluate the thesis.

In the event of a request for the late submission of a report, receipt of the report after the appointment has been cancelled or the loss of report, postal delay, etc., the Director/Dean R&D shall take an appropriate decision in the interest of the candidate concerned.

3. The positive reports received from the external examiners and the Research Guide (Internal Examiner) shall be immediately forwarded to the Head of the Department who, after ascertaining that the reports are favourable, shall arrange the viva and the defence of the thesis at the earliest date suitable to the Internal Examiner, one of the external examiner and the Chairperson. The Head of the department shall make the reports available to the candidate, the Research Guide and the Chairperson at least a week before the date of the viva. In case of any problem, the Dean R&D will take an appropriate decision.

4. In case one out of two external examiners give unfavourable report, then the Controller of Examinations shall get the thesis examined by an additional examiner from the panel of examiners approved by the Board of Examinations.

D) Viva voce and defence of the thesis

The day, date, time and the place for the viva voce and the defence of thesis shall be notified by the Head of the Department at least eight days in advance. The procedure and norms for the conduct of viva, payments, etc. shall be as laid down by the institute. The defence of the thesis shall take place in the presence of the Guide (Internal Examiner), one External Examiner and the Chairperson, who shall jointly evaluate the performance of the candidate. In case of dispute, Dean R&D after the discussions with the Director shall take an appropriate decision. The examiners present for the viva-voce and the defence of the thesis shall submit to the COE their final consolidated report along with the reply given to the queries raised by the external examiners in the written form, signed and accepted by the members of the Viva-Voce Panel and a list of the persons attending the open defence in respect of the award of the Ph.D. degree immediately after the defence is over.

5. In case the defence is not satisfactory, the examiners may unanimously recommend with reasons that a fresh viva-voce and defence of the thesis be organized within a period of not less than one month. If the defence is still not satisfactory, the Committee would record the reasons for the same. The Committee may recommend the resubmission of the thesis with suggested changes.

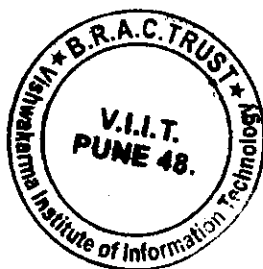
10. Ph. D Tracking System


A full fledged system, integrated with institutional ERP is at place to track the progress of candidate right from admission to submission of thesis. The system shall keep records of admission, topic approval, progress seminars, papers and patents published by candidate and synopsis report. The same system shall be used for evaluation of candidate by the progress monitoring committee. Committee report shall be uploaded in tracking system. Email communication shall be generated from system for all the stakeholders based on the events and activities.

11. Depository with the University Grants Commission (National Academic Depository)

Following the successful completion of the evaluation process and announcements of the award of Ph.D., the Institute shall submit a soft copy of the Ph.D. thesis to the University Grants Commission within a period of thirty days, for hosting the same in INFLIBNET accessible to the College.

The University shall issue a provisional certificate, certifying to the effect that the Degree has been awarded in accordance with the Regulations issued by the University Grants Commission as per the Notification dated 1st June 2009 and subsequent the Gazette of India published on 11th July 2009.




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