# **Information Brochure**

# Ph.D. Admissions, September 2020





# भारतीय सूचना प्रौद्योगिकी संस्थान,लखनऊ

(संसदीय अधिनियम द्वारा अधिकृत राष्ट्रीय महत्व का संस्थान)

Indian Institute of Information Technology, Lucknow (An Institute of National Importance by Act of Parliament, Under PPP Mode)

## Admission to Ph.D. Programme, September 2020

## Applications are invited for admission to the Ph.D. Programme at IIIT-L

Applications are invited for admission to the Doctor of Philosophy (Ph.D.) programme beginning in September 2020. Applicants meeting the minimum eligibility in the broad areas of Engineering/ Management/ Mathematics are invited to submit their application under the following admission categories:

## 1. ADMISSION CATEGORIES AND ELIGIBILITY

The applications are invited under the below mentioned categories. All the applicants will be admitted only through the institute's selection process. In general, the Selection Panel/ Director can relax and/or set higher criteria for selection of suitable candidates.

S.NO	Category	Minimum Eligibility
1	<b>SELF FINANACED FULL TIME</b> <b>RESEARCH SCHOLARS:</b> The applicants shall not receive any financial support from the institute in any form.	<ol> <li>Applicants should have qualified CSIR/ UGC/ DAE/ NBHM/ DST/ DBT/ ICAR/ ICMR/ ICPR or secured funding from such an agency after completing the Master's degree in relevant discipline with a consistently good academic record in relevant discipline. OR</li> <li>Applicant should have a Master's degree in relevant discipline with a consistently good academic record.</li> </ol>
2	<b>WORKING PROFESSIONAL:</b> An applicant of this category is sponsored by his/her employer. The sponsoring organization must specifically undertake to relieve the applicant to enable residential requirements of the Ph.D. programme and also provide necessary facilities for carrying out the research (if applicable). Such applicants shall not receive any financial support from the institute in any form.	1. FOR DETAILS REGARDING ELIGIBILITY AND RESEARCH MODE (PART TIME/FULL TIME, RESIDENTIAL PERIOD etc.): SEE <u>ANNEXURE A</u>
3	ASPIRING STUDENTS in HIGHER ACADEMICS (ASHA): This category is specially designated to the fresh graduates from CFTI's/IIT's/NIT's/IIIT's. They shall not receive any financial support from the institute in any form.	<ol> <li>The minimum educational qualification for admission is a B.Tech degree with at least 8.5 CGPA or 80 % (as applicable in the graduating institute) with a consistently good academic record in relevant discipline.</li> <li>Candidates seeking admission, should possess requisite marks/grades in GATE (cutoff to be defined by IIIT L) in Computer Science/EE/EC/Ch.E/ME or related field.</li> </ol>

## 2. DURATION AND RESIDENCY PERIOD OF THE PROGRAMME

- A. The minimum duration of the Ph.D. Programme (excluding dropped semester(s)/maternity leave) is 3 years (36 months) from the date of joining.
- B. All Ph.D. students have to stay within the campus during the entire period of Ph.D. programme. However, special permission, on a case to case basis, may be considered by the competent authority for staying outside the campus.
- C. In general, Ph.D. students with Institute Scholarship can be away from the Institute only after pre-submission seminar. However, in exceptional cases, they may be permitted to leave the institute only after completion of coursework and comprehensive examination. In such cases, Ph.D. category will be converted to another appropriate category, based on the eligibility. This will be based on Board of Doctoral and Post Graduate Studies (BDPGS) recommendation and with the approval of Chairman (Senate). This provision of conversion can be availed of only once during the programme.
- D. The minimum residency period of all categories, shall be the period required by the candidate to complete his/her comprehensive examination.
- E. The maximum period for completing the Ph.D. programme is 5 years (excluding maternity leave) from the date of admission. However, financial assistantship will be up to maximum three years (with possible extension of maximum ONE year after due review and recommendation from supervisor) from the date of joining or date of thesis submission (whichever is earlier).
- F. Semester drop is permitted up to two semesters in the entire duration of Ph.D. programme on bonafide grounds like medical, delay in getting relieving order from preceding organization or any other valid grounds based on BDPGS recommendation and approval of Competent authority. However, the maximum period of completing Ph.D. programme will remain unchanged.

## 3. Important Dates:

S. No	Particulars	Dates
1	Application forms are available from	10 <sup>th</sup> August 2020
2	Last date of submitting applications	10 <sup>th</sup> September
3	Display of list of shortlisted candidates for interview	To be declared
4	Personal Interviews	To be declared
5	Announcement of results	To be declared
6	Reporting at IIIT- L by	To be declared

## 4. Research Areas\*:

One can refer to faculty profile for details. However, *priority* will be given to the following areas in this session:

## **Engineering (Computer Science/Information Technology)**

Cryptography and Network Security, Hardware Security, Big Data, Cloud Computing, Distributed Systems, Parallel Computing, Image Processing, Machine Learning, Wireless Sensor Networks, Internet of Things, Database Management.

## Management

Digital Marketing, Algorithm Trading, Business Analytics, Organizational Communication, Experimental Phonetics, Sustainable, human resource management, Human resource management, Organizational behavior, Corporate social responsibility, Intellectual capital and Knowledge management, Digital Marketing, E-Business, Business Analytics and Fintech.

## Mathematics

Design and analysis of block ciphers, Design and analysis of cryptographic hash functions, Multivariate public key cryptography, Post quantum cryptography, Quantum computing, Dendrites, Self-similar dendrites, Mathematical modelling using fractal techniques, Homogenization, Elliptic partial differential equations, Optimal control problem.

\*Research Areas may be added to the pool depending upon the availability of the faculty members in different departments of the institute.

## NOTE:

AN EXCEPTIONAL RESEARCH PROBLEM, OUTSIDE THE ABOVE-MENTIONED AREAS, MAY ALSO BE CONSIDERED.

## 5. Application Process:

- A. All applications will be received through email only.
- B. An applicant has to download and fill the Application Form and attach a recent passport size photograph on the space provided in the Application Form.
- C. Scanned copy of the completely filled and self-attested application form along with self- attested proofs of education, date of birth, experience, payment receipt etc. should be sent to <u>phdadmissions@iiitl.ac.in</u> positively by <u>5:00 pm of the last date</u>. Self-attested proofs of any other necessary information, depending upon the category under which the applicant seeks admission, should also be attached.
- D. The applicant has to carry the print out of all the documents (self-attested scanned copy of the Application form and Supporting Documents) and their originals during the personal interview.
- E. The applicant has to send fresh application to apply for multiple disciplines and payment also to be made separately.
- F. Please read the instructions given in the Ph.D. information brochure carefully before filling up the application form.
- G. Contact: For any clarification, you may contact us through email at phdadmissions@iiitl.ac.in

## 6. Annexures:

- A. Click here to download "DETAILS REGARDING ELIGIBILITY AND RESEARCH MODE (PART TIME/FULL TIME, RESIDENTIAL PERIOD etc.)" for WORKING PROFESSIONAL category.
- B. Click here to download "No Objection Certificate" for candidates applying under working professional (if applicable).
- C. Click here to download "Approval Letter" for candidates applying under working professional (if applicable).
- D. Click here to download "Application Form"

## 7. Instructions to be followed after the submission of applications:

- A. Applicants should check the Institute website for results/important announcements/updates regularly.
- B. The institute shall communicate the list of shortlisted candidates through email only. Hence, applicants should check their email provided in the application for all important communications and announcements.
- C. Candidates called for Written test/Interview should bring the following documents with them:
  - 1. Printout of the self-attested scanned copy of the Application form

- 2. Printout of the self-attested Supporting Documents
- 3. Printout of the self-attested proof of payment receipt
- 4. Photo ID Card.
- 5. One set photo copies of all the attachments
- 6. Originals of Application form, proofs of education, date of birth, experience, payment receipt etc. (along with any other relevant certificates and mark sheets.)
- 7. M.Tech/ME Thesis / dissertation / report.
- 8. Print out of two best publications representing his/her research background.
- 9. Contact details of two referees
- 8. Fees structure\*:

Fee Structure for Ph.D. students taking admission from Academic Year 2019-20 onwards

- 1. \*The below mentioned fee is subject to revision from time to time.
- 2. \*The Fee Structure for the WORKING PROFESSIONAL category is different and is provided in <u>ANNEXURE A</u>

FEE STRUCTURE FOR <mark>Ph.D</mark> . IIIT-LUCKNOW For Academic Session 2019 – 2020				
	For General, OBC, SC, ST and PWD Category S	Students (in	INR)	
S1. No.	General Fees & Dues	1st Sem.	2nd Sem	
Α	One Time FEE			
	Admission Fee	1500		
	Institute Caution Money (One time Refundable)	2000		
	Enrolment Fee	1000		
	Identity Card Fee	1000		
	Alumni Fund	3000		
	Institute Development and Maintenance Charges	10000		
В	Annual Dues			
	Benevolent Fund	500		
	Group Insurance and Student Welfare Fund	1300		
	Library Fee	2000		
С	Semester Fees			
	Tuition Fee	25000	25000	
	Laptop Charges (if laptop taken from the Institute)	5000	5000	
	Hostel Fee (Double Occupancy Rs. 7200/-) (Single Occupancy Rs. 14400/-) Single Room will be allotted only in case of availability of rooms at Hostel	14400*	14400 <b>*</b>	
	Electricity and Water charges	2000	2000	
	Gymkhana Fee	1500	1500	
	Examination Fee	1200	1200	
	Grade Card Fee	500	500	
	Medical Fee	500	500	
	TOTAL Fee	72400	50100	
	Mess deposit (One Time Refundable)	2500		
	Mess Charges			
	(Mess charges are subject to actual)	15000	15000	
	<b>TOTAL including Mess Fee</b>	89900	65100	

\* Hostel Fee in the above Fee Structure has been taken for Single Occupancy Room.

## <u>ANNEXURE - A</u> Indian Institute of Information Technology - Lucknow

## *Eligibility and Requirements for Working Professionals for Research Studies leading to Ph.D.* <u>Degree at IIIT-L</u>

Candidates who satisfy the following conditions are eligible to seek provisional registration for Ph.D. course

- 1. The candidate should be gainfully employed with a firm/organization as a full-time employee.
- 2. A candidate should have M.Sc. / M.Tech. / M.S. / MBA/ or any other Master's Degree in the concerned subject or any other degree recognized as equivalent thereto with a consistently good academic record.
- 3. Candidates having experience of five or more years after B.Tech. / MCA with a consistently good academic record, are also eligible for the Ph.D. programme.
- 4. A sponsored candidate can be a full-time residential scholar in IIIT Lucknow or may even be considered for admission as full time / part time scholar at her/his work place itself, provided the work place could be recognized as a research center upon the compliance of the following stipulations thereto:
  - 4.1. The said work place / professional center should formally sponsor the aspirant candidate for research studies on full / part time basis.
  - 4.2. The Management / Administration of the work place / professional center should agree to extend the research facilities, infrastructural support, library / computing resources and sufficient quality time for the researcher.
  - 4.3. The Management / Administration of the Work place / Professional center should be willing to extend the logistics of providing local hospitality and travel expenses to the research supervisor(s) / Doctoral committee whenever the visit is warranted for monitoring and reviewing the research progress and also grant permission to the candidate to travel to IIIT Lucknow to meet research supervisor(s) / Doctoral committee for discussion and assessment process.
  - 4.4. The Management / Administration of the Work place / Professional center should be able to identify a suitably qualified resource person, if available, to act as a local mentor / local supervisor for the research candidate, who could be identified as the joint supervisor for such a candidate by IIIT Lucknow along with the main supervisor from IIIT Lucknow.
- 5. Such a sponsored candidate may complete the course requirement in remote mode, remaining in contact with the research supervisor(s) on line / offline. S/he has to carry out the studies as stipulated, submit the assignments, participate in discussion-sessions, present seminars, appear for quizzes, review tests etc. online or in person. However, such a sponsored candidate should plan to be in the campus of IIIT Lucknow with the research supervisor(s) at least for 15 days cumulatively every 6 months.
- 6. The research papers / patents resulting from such joint work will be the joint properties of both the institute and the professional workplace, and the advantage will be proportionately shared.
- 7. If the sponsored candidate is a full-time research candidate, s/he would be governed by the present minimum duration stipulations (refer to the Ph.D. Information Brochure, point number, 2.D).

- 8. However, if the sponsored candidate is a part time Ph.D. candidate, then the minimum duration required to submit the Ph.D. Thesis would be 3 years after completing all credit requirements, and the maximum would still remain as per the norms (refer to the Ph.D. Information Brochure, point number, 2.E).
- 9. In general, all the academic requirements for example, credit requirement, course work, comprehensive exam etc., will be applicable as per the institute norms.

## **Registration:**

- 1. The candidate should identify a supervisor/mentor for his study, identify a research topic, identify a relevant field of research from his profession and propose a plan of study. With this pre-preparation the candidate should apply for registration.
- 2. Provisional registration shall be based on the recommendation of the prospective supervisor and with the approval of the selection committee.
- 3. The registration is valid for a maximum of five years (excluding maternity leave) from the date of admission.
- 4. If the candidate fails to submit the thesis even after five years as mentioned above, the registration will become invalid automatically.
- 5. The final application for the candidate will be submitted only after the supervisor will accord his/her approval.
- 6. The minimum residency period, for the professionals staying in the campus, shall be the period required by the candidate to complete his/her comprehensive examination.
- 7. At the time of submission final application, the following documents should be enclosed:
  - a) No Objection Certificate from the place of work (if applicable).
  - b) Approval Letter from the place of work (if applicable).
  - c) Supervisors Acceptance Letter.
  - d) Research Proposal.

## **Fee Structure:**

S.NO	Fee Head	Amount
1	Core Credits (Minimum 16)	Rs. 30,000 per credit
2	Tuition Fee	Rs. 15,000 per semester (till final defense).
3	Comprehensive Exam	Rs. 30,000 (Depth + Breadth + SOTA)
4	Pre-Submission Seminar	Rs. 25,000
5	Final Defense	Rs. 25,000

## **Case Study:**

Candidate 'A' takes 'M' semesters to complete 16 Core Credits, and an additional 'N' Semesters for the rest of the degree requirements.

So, the fee paid by the candidate 'A'

- 1. Per semester  $[1 \sim M] = \frac{16}{M} \times 30000$  Rupees
- 2. Per Semester  $[M+1 \sim M+N] = 15,000$  Rupees

Therefore, total expense =  $16 \times 30000 + 15000 \times N + 30000 + 25000 + 25000$  Rupees **Example:** 

#### Example: $I \in M = 1 M$

If M = 1, N = 4,

Total fee paid by the candidate = Rupees 4,80,000 + Rupees 60,000 + Rupees 30,000 + Rupees 25,000 + Rupees 25,000

= Rupees 6,20,000 only.

#### Annexure B:

## NO OBJECTION CERTIFICATE (NOC) FOR WORKING PROFESSIONAL CATEGORY

## (This should be typed on a letterhead of the Organization/Institution) (AS APPLICABLE)

То

Faculty In-charge (Post Graduate and Research.) **IIIT Lucknow** Uttar Pradesh.

Dear Sir,

This is to certify that our Organization/Institution has no	o objection on the candidature of Mr. /Ms.
, who is working a	s to
join the Ph.D. programme in the Discipline of	at IIIT
Lucknow under Working Professional Category.	
If Mr. / Ms.	is admitted to the Ph.D.programme in

the Discipline of \_\_\_\_\_\_\_\_ at IIIT Lucknow, we shall allow him/ her to undergo the programme of studies and also to fulfil the residential requirement (if any) for required course-work at IIIT Lucknow as per your institute rules and regulations.

During the period of the academic programme, the candidate will be permitted to carry out his / her research work at our laboratories / organization and will be given the required facilities.

## Signature and Seal of the Issuing Authority

Date: **Place:** 

## Annexure C

## APPROVAL LETTER FOR WORKING PROFESSIONAL CATEGORY

(This should be typed on letterhead of the sponsoring organization) (AS APPLICABLE)

To Faculty In-charge (Post Graduate and Research.) IIIT Lucknow Uttar Pradesh.

## Sub: Approval of an Employee for PhD Programme.

Dear Sir,

We approve the candidature of Mr. / Ms	who is an employee
with designation	in our organization for doing Ph.D. programme in the
Discipline of	_at IIIT Lucknow, under Working Professional Category.

During the course of the Ph.D programme, all the financial liabilities of Mr. / Ms.

towards IIIT Lucknow (Fee, Travel support, Registrations in workshops and conferences, Publication charges (if any) etc. ) will be provided by the candidate in full.

Signature and seal of the Issuing Authority

Date: Place:



Indian Institute of Information Technology, Lucknow. Chak Ganjaria (C.G.) City, Lucknow - 226002, (U.P) - India भारतीय सूचना प्रौद्योगिकी संस्थान - लखनऊ चक गजरिया (सी जी) सिटी, लखनऊ २२६००२ - उत्तर प्रदेश, भारत Web: https://www.iiitl.ac.in email: contact@iiitl.ac.in

# Ph.D. Application, September 2020.

	For Official Use Only						
Date of Receiving:	Application Number:	Admission Category:					

- Applicants must read Online Advertisement and Information Brochure for Ph.D. Admission very carefully before filling the application form.
- The Application fee, Eligibility criteria, Admission category, Research areas and other details are clearly mentioned in the Online Advertisement and Information Brochure for Ph.D. Admission.
- Scanned copy of the completely filled and self-attested application form along with selfattested proofs of education, date of birth, experience, payment receipt etc. should be sent to <u>phdadmissions@iiitl.ac.in</u> positively by 5:00 pm of the last date. Self-attested proofs of any other necessary information, depending upon the category under which the applicant seeks admission, should also be attached.

i.       SELF FINANACED FULL TIME RESEARCH SCHOLARS ()       Attested Photograph         ii.       WORKING PROFESSIONAL ()       Attested Photograph         iii.       ASPIRING STUDENTS in HIGHER ACADEMICS (ASHA) ()       Attested Photograph         3.       Proposed Research Area       5.       Occupation of the Mother         4.       Name of the mother       5.       Occupation of the Mother         6.       Nume of the Father       7.       Occupation of the Father         10.       Marital Status       11.       Gender         12.       Category       13.       Religion         14.       Payment Details: Anount Paid       Payment Mode (RTGS/NEFT)       Transaction No/Reference No.         15.       Address For Correspondence       16.       Permanent Address         PIN:       Email: Cell Number:       PIN:         Email: Cell Number:       PIN:       Email: Cell Number:	1.	Full name of the Applicant					Recent Passport Size Self
4. Name of the mother       5. Occupation of the Mother         6. Name of the Father       7. Occupation of the Father         8. Date of Birth of Candidate       9. Nationality         10. Marital Status       11. Gender         12. Category       13. Religion         14. Payment Details:       13. Religion         Amount Paid       Payment Mode (RTGS/NEFT)       Transaction No/Reference No.         15. Address For Correspondence       16. Permanent Address         PIN:       Email:       Cell Number:	2.		SCHOLARS ( ii. WORKING PR iii. ASPIRING STU	) ROFESSION	AL()		
end     the Mother       6. Name of the Father     7. Occupation of the Father       8. Date of Birth of Candidate     9. Nationality       10. Marital Status     11. Gender       12. Category     13. Religion       14. Payment Details:     Amount Paid       Amount Paid     Payment Mode (RTGS/NEFT)       Transaction No/Reference No.       15. Address For Correspondence       16. Permanent Address							<u></u>
8. Date of Birth of Candidate     9. Nationality       10. Marital Status     11. Gender       12. Category     13. Religion       14. Payment Details:     Amount Paid       Amount Paid     Payment Mode (RTGS/NEFT)       Transaction No/Reference No.       15. Address For Correspondence       PIN:       Email:       Cell Number:	4.	Name of the mother					
10. Marital Status     11. Gender       12. Category     13. Religion       14. Payment Details:					the Fa	ther	
12. Category     13. Religion       14. Payment Details:     Amount Paid       Amount Paid     Payment Mode (RTGS/NEFT)     Transaction No/Reference No.       15. Address For Correspondence     16. Permanent Address	8.	Date of Birth of Candidate			9. Natior	nality	
14. Payment Details:       Amount Paid       Payment Mode (RTGS/NEFT)       Transaction No/Reference No.         15. Address For Correspondence       16. Permanent Address         PIN:       Email:       Email:         Cell Number:       Cell Number:	10.	Marital Status			11. Gende	er	
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PIN: Email: Cell Number: PIN: Email: Cell Number:	14.		yment Mode (RTGS/N	NEFT)	Transaction N	No/Referen	ce No.
	PIN: Email:	mber:	17.Please See the N	PIN: Email: Cell Numb	per:		

18. Educational Qualification (10<sup>th</sup> onward):

Qualification	Subject/Discipline	Board/Institute/Univ.	Year of passing	% of marks	Division	
10th						
12th						
Diploma If any						
B.E./B.Tech.						
M.E./M.Tech.						

19. Performance in Qualifying Exam (GATE, NET, UGC etc.)

Name of The Exam	Branch	Year	Percentile (& Score)	All India Rank

20. Experience, if any, of service and/or Research including present position held:

Name of the employer	Designation	From(mm/YY)	To(mm/YY)	Total Period	Nature of Work	Salary Drawn	Remarks

21. Publication In referred Journals (If any):

i. Journal 1

ii. Journal 2

iii. Journal 3

iv. Journal 4

Sl.No.	Name Of Document	Please Tick ()
1.	10 <sup>th</sup> Class Mark sheet	
2.	12 <sup>th</sup> Class Mark sheet	
3.	B.Tech Degree	
4.	M.Tech Degree	
5.	Sponsorship Letter (In Case of Working Professional)	
6	NOC (In Case of Working)	
7.	Relevant Experience	
8.	Payment Receipt	
9.	Caste Certificate	
10.	Updated CV	
11.	GATE/NET Score Card	
12.	Photo ID Card (Any)	
	1	

## DECLARATION

I hereby declare that all the statements made in this application are true and complete and nothing has been concealed/ distorted. I am aware that, if at any time I am found to have concealed/distorted any material information, my engagement is liable to be summarily terminated without notice.

Place: Date:

Signature of the Applicant