Special Advertisement for Admission to PhD (Full-Time and Part-Time) under the "Visvesvaraya PhD Scheme for Electronics and IT"
Programme in Engineering for the Autumn Semester, Academic Year: 2024-25

Advt. No.: NITD/R&C/02/PhD/2024-25

Online Applications are invited for admission to PhD programme Full-Time and Part-Time under Visvesvaraya Scheme. Applicants must apply online (via Google Form), as mentioned in the "**Procedure for Online Application/ How to Apply**" Section. The Broad areas of Research, Eligibility Criteria, Selection Procedure, Reservation, Teaching Assistantship-cum-Scholarship, Visvesvaraya Scheme, etc. are given in the advertisement.

S. No.	Department	Discipline/Area of Research
1.	Computer Science and Engineering (CSE)	
2.	Electrical Engineering (EE)	Refer Table I
3.	Electronics Communication & Engineering (ECE)	

How to apply: The link of fill the online application form can be accessed through Institute website https://nitdelhi.ac.in. Please submit separate application forms, if applying for more than one departments/categories. An application fee of Rs. 1000/- (Rs. 500/- for SC/ST/PWD candidates) is required to be paid online. The candidates are required to apply online and **there is no requirement to send the Hard Copy** of the application form to the Institute. Application fee shall not be refunded in any case.

A candidate interested in applying in more than one department/category shall be required to submit separate application forms along with appropriate fees and documents. At the time of interview no conversion from one category to another will be allowed.

Last date for submission of online application form is **August 9th, 2024**.

For more details, the candidates are advised to visit the Institute website https://nitdelhi.ac.in for updates.

Table I

A. Department wise Broad Areas of Research in which applications are invited:

	Department	Broad Areas of Research
1.	Computer Science and Engineering (CSE)	Internet of Things, Databases, Data Warehousing and Data Mining, Data Analytics, Data Science, Big Data, Spatial Data Mining, Geographic Information Systems (GIS), Machine learning, Machine Learning for Healthcare, Computer Vision, Digital Image Processing, Graph Data Mining and Analysis, Big Data Infrastructure and Optimization, Health Informatics, Software Analytics, Mining Software Repositories, Anomaly Detection in Big Data Streams, Generative Artificial Intelligence, Explainable AI (XAI), Deep Learning for Natural Language Processing (NLP), Ubiquitous Computing, Complex Networks, Dynamics on/of networks, Graph Spectra, Time Varying Networks, Community structure, Link Analysis, Recommender Systems, Opinion Dynamics, Mathematical Modeling of Epidemic Spreading, Intelligent Transportation System, Federated Learning, Machine Learning with Graphs, Video Analytics, Wireless Sensor Networks, Meta-heuristic Optimization, Internet of Things, Cloud and Fog Computing, Robotics, Information security, Wireless networks, Mobile edge networks, Vehicular Networks, Wireless Edge Computing, Information Security, Biometric Security, Adversarial ML, Cyber Warfare, Application Security, Smart Agriculture, Bibliometrics, Smart Disaster management, Smart Healthcare
2.	Electrical Engineering (EE)	**Power & Energy Systems:** Power System Dynamics & Control, Stand Alone power System, Power system operation & Optimization, Renewable energy systems (solar, wind and Hybrid), Probabilistic Power System, Uncertainty quantifications, Deregulation, Distributed Generation, Applications of Energy Storage Devices to Power System. Flexible AC Transmission System, Energy System Planning & Auditing, Loss Allocation, Power Systems Stability & Control. Electricity Market, Security Analysis, Fault Detection, Smart Energy Network, Reliability Engineering, Power Systems Analysis and Smart Grid, Failure Analysis, RAMS.

		Power Electronics & Electrical Drives: Power Electronics, Power Quality, Improved Power Quality Convertors, Custom Power Devices (DSTATCOM, DVR & UPQC), Active Power Filters, Multi-level converters/inverters, Matrix converters, Application of Power Electronics to Renewable Energy Systems (Solar, Wind, Fuel Cells etc.), Grid Integration of Renewable Energy Sources, Smart DC Grids (Micro/Nano), Smart AC-DC Grids, Modeling, Design and Digital Control of DC-DC Conversion System, Battery Management System (BMS), Electric Drives, Flexible AC Transmission System, Special Machines & Control, Modulation Techniques, Electric Vehicles, Design of DC fast chargers for EV/LEV, Control of Renewable Energy Systems, Variable frequency transformer. **Control & Automation:** Control Theory, Model Order Reduction of Linear, Non-Linear and Parametric systems, Finite Element modeling of Distributed Parameter systems, efficient Algorithms for fast simulation of power electronics circuits & power systems, vector control of electric drives, Disease Modelling, Artificial Intelligence and Deep Learning. Cyber-Physical Systems, Learning Control, Networked Control Systems, Decentralized control, Constrained control systems, Mechatronics.
3.	Electronics and Communication Engineering (ECE)	Artificial Intelligence, RF and Microwave Circuits and Devices, Antenna Design Nanoscale semiconductor devices, Electronic Circuits & Devices, Photonics devices, Semiconductor Opto-electronic Devices Communication Systems & Networks, Optical & Wireless Communication Systems, Image Processing, Signal Processing, Machine Learning, Block-chain, Peer-to-Peer Networks, Neural Networks, Game theory, Computer Vision, Robotics, Pattern Recognition, Data Science and Analysis, 3G, 4G, 5G and 6G Technology, Telecommunication Networks, IoT, Digital/Analog VLSI Design, Low Power VLSI Design, VLSI Testing, Analog and Mixed Signal IC Design, VLSI Architecture for Signal/Image Processing, Embedded Systems, Underwater Image Processing, Smart Agriculture, High-Frequency Circuit Design, RF Energy Harvesting, Biosensors, MEMS.

B. Eligibility Criteria

An applicant possessing the prescribed qualifications as mentioned below shall be eligible for admission to the PhD programme (under Visvesvaraya scheme). The course as well as University/Institute/Organization of the qualifying degree must be recognized by AICTE/ UGC or equivalent and will be verified by the Institute before registration. The candidate can apply in the following categories:

- PhD programme (Full-Time/Part-Time) under Visvesvaraya scheme

1. PhD programme (Full-Time) under Visvesvaraya scheme

Applications are invited for five seats under Visvesvaraya Scheme supported by the Ministry of Electronics and Information Technology (MeitY), Govt. of India in the following areas:

- Computer Sciences and Engineering
- Electronics and Communication Engineering
- Electrical Engineering

The minimum educational qualifications are as follows:

Master's degree in Engineering/Technology in the relevant area of research along with Bachelor Degree in appropriate branch of Engineering/Technology with a first class or minimum 60% mark (or CGPA of 6.5 on 10 point scale) in the qualifying examination.

or

B.Tech/B.E./BS (4 years) with a CGPA of 8.5 and above on a 10-point scale or 80% aggregate form Centrally Funded Technical Institute (CFTI)/ State funded institutes/ university. All such candidate must be **valid GATE score**. *If selected, the candidate will require to clear minimum 24 credits before his/her comprehensive examination.*

2. PhD programme (Part-Time) under Visvesvaraya scheme

2.1 Candidates from organizations having Memorandum of understanding (MoU) with NIT Delhi.

2.2 Current employees/scientists of research and development organizations/CFIs/State Govt. Universities/Institutes ranked within the top 100 by NIRF provided that the applicant possesses the minimum qualifications as given in Sr. No. 1;

2.3 The following additional eligibility criteria are also applicable to apply for Part-Time PhD:

Bachelor's degree in engineering/ technology with a minimum of 70% marks in aggregate or equivalent CGPA and a minimum of 10 years of work experience (at the level of Assistant Professor or equivalent) in an engineering degree level technical Institute or R&D organization/ industry, and Evidence of master's level R&D work completed.

The candidate, if selected, will have to complete mandatory course requirements along with the regular counterparts; the candidate will require to proves to the satisfaction of NIT Delhi that his/her official duties permit him/her to devote sufficient time for research work (No Objection Certificate required).

2.4 The working candidates under this category **must complete the residential requirements up to the completion of course work at NIT Delhi**. The Part-Time student category cannot be converted into Full-Time category at any time.

2.5 The Part-Time candidate(s) shall be required to submit a ***No Objection Certificate*** (NOC) from their Employers stating that the concerned candidate(s) is an employee of that organization and is allowed to pursue course work and his/her research work at NIT Delhi with the residential requirements as per the NIT Delhi norms, and his/her routine work permits him/her to devote sufficient time for research work.

2.6 For a foreign national candidate who applies through the Ministry of Education, Govt. of India, or Indian Council of Cultural Relations, Govt. of India, are eligible to apply if they possess the same minimum qualifications as required for PhD programme admission in case of Regular candidates.

Financial Support for Full-Time PhD candidates under Visvesvaraya PhD Scheme:

Fellowship: Rs. 38,750/- per month in 1st & 2nd Year and Rs. 43,750/- per month in 3rd, 4th and 5th years of PhD. (support till submission of thesis or 5 years whichever is earlier).

Research Contingency Grant Support: An amount of Rs. 1.20 Lakh per year for a Full-Time PhD candidate as support for PhD candidate.

Financial Support for Part-Time PhD candidates under Visvesvaraya PhD Scheme:

Fellowship: The Part-Time PhD candidate is eligible to receive a One-time incentive of Rs. 3.00 Lakhs, through DBT in his/her bank account, on successful completion of PhD and required formalities with the institution and the scheme; such as submission of requisite completion documents, claims, etc. through the institution to Digital India Corporation (DIC).

C. Important Points

- It is **mandatory to qualify the PhD Entrance Examination** for the candidates applying for PhD Full-Time /Part-Time under Visvesvaraya Scheme.

- PhD course work for Executives (having work experience of 15 years or more in Government/ State Government/ Autonomous Bodies/ Reputed Companies) may be

conducted through Project Work/Seminar.

- Merely fulfilling the above minimum eligibility criteria does not ensure the selection or even eligibility for the entrance test/interview or both.

- Regarding selection, the decision of the Competent Authority will be treated as final and binding.

- **Any request will not be entertained to conduct online presentations and interviews.**

D.   Seat Matrix:

The number of seats depends upon the number of available PhD supervisors in the Institute. The following table shows the tentative number of seats available in various departments for admission during Autumn Semester 2024-25, the number of seats may change at the time of admission without any further information or notification. The number of seats may increase/decrease as per the vacancies available at the time of admission.

Visvesvaraya Scheme	
Full-Time	**Part-Time**
03*	**01**

*including 2 seats for Chips to Startup (C2S) Programme

E.   Admission Procedure

i. Mere short-listing of an applicant does not confirm admission to PhD programme. The admission shall be solely based upon the performance of individuals during "presentation and interview" and availability of the Supervisor in the proposed area of research.

ii. The admission to PhD programme (Full-Time/Part-Time) in all disciplines mentioned in this advertisement shall be made purely on the basis of a "***presentation***" to be made by the shortlisted applicants in their proposed area of research followed by "***interview***" to be conducted by the respective Department Admission Committee.

iii. Short-listing of candidates shall be done by Departmental Admission Committee for the process of "*presentation and interview*" for the applicants. For this purpose, a screening test shall be conducted by the institute. Only those applicants who score marks above the cutoff of **40%, i.e., 24** marks out of 60 (**35% i.e., 21** marks out of 60 for **SC/ST/PWD** candidates) in the Institute written examination shall be eligible for presentation and interview process. Marks obtained in the screening test shall not be counted for preparation of final merit list of the successful candidates.

iv. The Pattern of Examination shall be as of GATE and NET examination. The Written Test will be of MCQ Mode with **no-negative marking**.

v. The Department Admission Committee for each Department shall recommend suitable candidates for admission based on its assessment of presentation and interview. Marks obtained in the screening test shall not be counted for preparation of final merit list of the successful candidates.

vi. The Department Admission Committee/Institute reserves the right not to recommend any candidate for admission to PhD in the respective department if the performance of the shortlisted candidates is not found satisfactory during "presentation and interview". The decision of the Competent Authority shall be final and binding.

All the applied/ selected candidates will be governed by the rules and regulations of the PhD Ordinance available at the Institute website. Candidates are advised to read the ordinance clearly before proceeding with the application.

F. Procedure for Online Application/ How to Apply:

1. Students must fill up the online Google Form within the stipulated time mentioned. Late submissions will not be entertained, under any circumstances. One application format is attached here, which needs to be filled with the desired documents in JPG/ PDF and upload on Google form.

2. The candidate must fill up the online Form within the stipulated time mentioned. Late submissions will not be entertained, under any circumstances.

3. Link for the Online Form: https://forms.gle/kyfp6pHS7WKEvoVM8

4. **While filling out the online Google Form, candidates are advised to read up all the requisite details very carefully, correctly and upload all the relevant documents along with application form (available at the end of this advertisement) in PDF format. The same application form is available in doc format with the advertisement on the institute website also.**

5. Candidates are advised to visit the institute website: www.nitdelhi.ac.in for frequent updates.

6. A candidate interested in applying in more than one department/ category shall be required to submit separate application forms along with requisite fees and documents.

7. Application Fee (***non-refundable)***:
   (a) UR/ OBC-NCL/ EWS Candidates: Rs. 1000/-
   (b) SC/ ST/ PwD Candidates: Rs. 500/-
   (c) *Foreign Nationals: USD 50

*Note: Foreign Nationals candidates (only) can be paid online through the following bank details:

Institute Bank Details:	**ICICI Bank**
Account Holder Name:	**Director NIT Delhi Fee Collection A/c**
Account Number:	**092901001801**
IFSC Code:	**ICIC0000929**
MICR Code:	**1100229103**
Swift Code:	**ICICINBBNRI**

8. The application fee can be paid online through the following link:
   https://pages.razorpay.com/pl_JctiRs9fDjAVVX/view
9. Candidates should mention **Transaction ID after paying the fee** in appropriate section of the application form. The application fee is *non-refundable*.
10. Part-Time candidates should produce *No Objection Certificate* (NOC) from their Employers at the time of Interview/ Document Verification.
11. Sponsored candidates should produce NOC/Sponsorship Letter from his/her Institute/organization at the time of Interview/Document Verification.
12. OBC-NCL/EWS certificate must have been issued on or after **1st April, 2024**. No certificate issued before this date shall be acceptable.
13. **Document verification:** the certificates (in original) of all the candidates recommended for admission shall be checked by the individual department.
14. Incomplete, improper, and wrong applications will not be considered for short-listing.
15. Any legal dispute pertaining to the admissions shall fall within the jurisdiction of High Court of Delhi only.
16. All admissions will be provisional till these are confirmed subject to medical fitness, payment of all the fees, fulfillment of eligibility conditions, and verification of certificates by the Office of Dean R&C of the Institute.
17. After payment of admission fee, no fee refund shall be entertained in any case of surrender of seat.

I. Important Dates

Sr. No.	Activity	Date
1.	Last date for submission of Applications (Strictly through Online Mode)	August 9th, 2024
2.	Display of list of eligible candidates by the concerned HoD in the Institute website	August 14th, 2024
3.	Written Test **Through offline (Physical) mode only.**	August 21st, 2024
4.	Display of list of candidates eligible for presentation & interview	August 21st, 2024 (AN)
5.	Presentation/ interview by all eligible candidates **Through offline (Physical) mode only.**	August 21st, 2024 (AN onwards)
6.	Display of list of selected candidates	August 21st, 2024
7.	Deposition of fee (Online)	August 22nd to August 30th, 2024
8.	Physical reporting in the Institute/ Document Verification	August 27th, 2024
9.	Commencement of Classes	As per academic calendar of NIT Delhi

Note: The institute reserves the right to fix suitable criteria for short listing of eligible candidates satisfying qualification and experience. The Institute reserves the right to modify or cancel this advertisement/any part of this advertisement at any stage. Only shortlisted candidates may be called for an interview. *Only Caution Money/Security shall be refunded in case a candidate withdraws after taking the admission to the PhD programme.* No request for a refund of any other fee paid shall be entertained under any circumstances.

For any queries, please contact:

Office of Dean (Research & Consultancy),
National Institute of Technology Delhi
Email: phdadmission@nitdelhi.ac.in
Phone: 011-33861112

Dean Research & Consultancy
NIT Delhi
011-33861112
phdadmission@nitdelhi.ac.in

Application Form for Admission to PhD Program
for Academic Year 2024-25 (Autumn Semester)

1. **Select program (Anyone)**

   Ensure your eligibility before selecting the program. If you wish to apply for more than 1 program, please apply separately.

Sl. No.	Department/Discipline	Tick (✓) in the Department/ Discipline you wish to apply
1	Computer Science and Engineering (CSE)	
2	Electrical Engineering (EE)	
3	Electronics and Communication Engineering (ECE)	

2. **Select Category of Registration of PhD applied and Details of NET/ NET-JRF/ GATE**

Sl. No.	Category of PhD Registration Applied	Tick (✓) in the PhD Registration Applied you wish to apply	Whether NET/NET-JRF/GATE Qualified. If yes, mention Year, Score and Rank	Paste a recent passport size photograph
1	Full Time under Visvesvaraya scheme			
2	Part Time under Visvesvaraya scheme			

3. **Name in Full (in BLOCK Letters):** ....

4. **Father's Name (in BLOCK Letters):** ....

5. **Mother's Name (in BLOCK Letters):** ....

6. **Date of Birth (DD/MM/YYYY format):** ....

7. **Gender: Male/Female/Others:** ....

8. **Address (in BLOCK Letters):**...

   ....

   District:.. State:...

   Mobile No.:...E-mail: ....@..........................

9. **Aadhar No.:**..

10. **Nationality:**.. **Religion:**..

11. **Category (UR/EWS/OBC-NCL/SC/ST/PwD/Foreign Nationals):**..

12. **Application Fee paid: Rs./USD** .... **(attach transaction slip)**

13. **Details of Examination Passed (from Class X onwards):**

Sl. No.	Examination Passed (Fill the applicable only)	Subject/ Discipline/ Specialization	Year of Passing	CGPA/ Percentage of Marks Obtained	Division (I/II/III)	Name of the Institute &University	Whether Documentary Evidence attached (Yes/No)
1	Secondary School Certificate (Class X)						
2	Higher Secondary School Certificate (Class XII)						
3	Diploma in Engineering/BSc (Tick anyone only)						
4	BE/B.Tech./ M.Sc. (Tick anyone only)						
5	ME/MTech/MPhil (Tick anyone only)						
6							
7							

14. Have you ever been disqualified or debarred from appearing in any examination conducted by a University/Board?

Yes/No

If yes, give details:………………………………………………………………………………………

DECLARATION BY THE CANDIDATE

I clearly understand that my application to the PhD program to the National Institute of Technology Delhi is subjected to the applicable regulations from time to time. I also understand that admission is allowed to me based on the certificates and documents produced by me. I also undertake that the certificates and documents produced by me in original are correct, genuine, and true to the best of my knowledge. If any information/ documents/ particulars are found to be forged or false at any stage in future, then the NIT Delhi can cancel my admission and all the fees deposited by me shall be forfeited. If any degree is awarded based on my admission on the basis on my forged documents, then that certificate/degree awarded by NIT Delhi shall be automatically cancelled. In such case, I shall have no claim, whatsoever, in respect of my admission.

Date…………………   **Signature of the Applicant**