भारतीय प्रौद्योगिकी संस्थान पटना

Indian Institute of Technology Patna

Advt. No.: IITP/ACAD/PhD/January 2027/01 **Date: 17/10/2026**

PhD Admission – January 2027 (Spring Semester, AY-2026-27)

I. Applications are invited for admission to the Doctor of Philosophy (PhD) programme, starting in January, 2027 (Spring 2026-27) in the following Departments and areas of research at IIT Patna:

Department	Areas of Research
Chemical & Biochemical Engineering	Reaction Engineering and Catalysis
	Modeling and Simulation
	Energy Storage, Conversion and Management
	Process Design and Optimization
	Bioprocess Engineering and Technology
	Waste Treatment and Pollution Control
Chemistry	Inorganic Chemistry (Synthesis / Catalysis / Materials)
	Organic Chemistry (Synthesis / Polymer / Materials)
	Physical (Theory / Experiment)
Civil & Environmental Engineering	Structural Engineering
	Geotechnical Engineering (Soil Dynamics, Geotechnical Earthquake Engineering, Ground Improvement, Geoenvironmental Engineering, Bio geotechnics), and Rock Engineering
	Transportation Engineering: Railway Engineering, Highway Engineering, Airport Engineering, Traffic Engineering, and Road Safety
	Water Resources Engineering
	Environmental Engineering
	Geomatics Engineering (Geoinformatics / Remote Sensing and GIS)
Computer Science and Engineering	Generative AI, Agentic AI
	Artificial Intelligence, Natural Language Processing, Multimodal Information Processing, Conversational AI, Responsible AI, Data Science, Machine Learning, Deep Learning, Social Networks, Computer Vision, Tiny ML, Model Compression, Knowledge Distillation
	Cyber Security & Blockchain and Theoretical Computer Science (Formal Methods, Algorithms)
	Applications of CSE (Climate Change, Disaster Management, Weather Forecasting, Natural Phenomenon Modelling, Combinatorial Optimization, Cyber-Physical Systems, Network Science)
	Intelligent Networks (IoT, Cloud Computing, Fog & Edge Computing, Machine Learning, Low Power Communication etc.)

Mechanical Engineering	Energy, Thermal, and Fluid
	Mechanical Design
	Manufacturing Technology
	Mechatronics, Robotics and Biomedical Engineering

Metallurgical and Materials Engineering	Polymers
	Metals
	Ceramics
	Nanomaterials
	Semiconductors
	Composites
	Mechanical Properties
	Functional Properties
	Computational Materials
	Additive Manufacturing of Metals and Ceramics

Mathematics	Algebra
	Algebraic Coding Theory
	Differential Geometry
	Harmonic Analysis
	Probability Theory, Statistical Inference, Reliability Estimation
	Mathematical Modeling and Computational Finance
	Biomathematics, Nonlinear Dynamics, Stochastic Modeling
	Matrix Theory, Control Theory
	Algorithmic Graph Theory
	Nonlinear Optimization: Variational Inequalities: Stochastic Optimization
	Differential Equation, Integral Equations and Numerical Analysis
	Neural Networks and Quantum Computing of Solutions of Differential Equations
	Cryptography, Cyber Security
	Quantum Computing, Blockchain, Internet of Things (IoT)
	Artificial Intelligence, Machine / Deep Learning
	Computer Vision, Medical Imaging, Multimodal LLMs, and Quantum Machine Learning
	Geometric Optimization
	Finite Fields

Electrical Engineering	Power and Control Systems	Control and Instrumentation, Power Engineering (Electric Drives & Power Electronics, Control & Protection, System Dynamics), Renewable Energy Power Generation
	Communication Systems and Signal Processing, RF and Microwave	Communication Systems & Networks (Wireless and Optical, AI in 5G/6G), Neuromorphic Computing, Quantum Communication, and Distributed Sensing, Quantum Computing, Signal Processing (Audio & Acoustics, Spatial Audio, Generative and Immersive Audio, Sound Field Control and Reproduction, Cognitive Decoding and Neuro-Acoustics), AI & ML in Digital Image & Video Processing, Biomedical embedded systems, AI/ML in multimodal signal processing, AI & ML and Intelligent Networks (IoT, Fog & Edge Computing), Active and Passive RF Circuits & Systems, RF Sensors & Antennas, Gen-AI and DL based Multifunctional RIS
	VLSI & Embedded Systems	VLSI & Embedded Systems and Microelectronics, Semiconductor Devices & Circuits Modelling and Fabrication, Optoelectronics, GaN HEMT, 2D material-based FETs, 1D material, Quantum dot-based Devices, Spintronics, Brain-inspired/Neuromorphic Computing and Hardware Accelerators, RFIC & Mixed Signal IC.

Physics	Experimental Condensed Matter Physics
	Soft Condensed Matter Physics and Quantum Materials (Experiment)
	Theoretical Condensed Matter Physics
	Computational Atomic and Molecular Physics
	High Energy Physics (Theory, Phenomenology & Experiment)
	Optics, Photonics, Optical Spectroscopy, and Ultrafast Spectroscopy
	Optical Spectroscopy of Quantum Materials
	Quantum Memory & Quantum Optics Experiment
	Deep Neural Networks for Computational Physics
	Nano-Optics & Nanophotonics (Experiment + Theory)
	Atomtronics & Bose Einstein Condensate
	Fault Tolerant Quantum Computing
	Quantum Information and Quantum Sensors
	Quantum Algorithm

	Subject	Research Area	Admission Category
Humanities and Social Sciences	Linguistics	Sociolinguistics, Computational Linguistics	All
	Geography	All Areas	External Fellowship only
	Sociology	All Areas	External Fellowship only
	Economics	Macroeconomic Reforms, Trade Investment, Microeconomic Modelling	All
	Management	Human Resources & Organizational Behavior	External Fellowship only
	Psychology	All areas	External Fellowship only

A. CATEGORY OF ADMISSION:

The Institute admits PhD students under the following categories:

1.1 REGULAR and FULL-TIME

A student in this category works full-time for her/his PhD degree. They can be classified as:

1.1 (a) TEACHING ASSISTANT (TA)

S/he receives assistantship from the Institute. The qualifying degree for financial support is:

1.1.1 BE / B. Tech./ BS / M. Sc./ MA/ MBA/ MCA /equivalent degree with **valid GATE score** above the prescribed cut-off level / NET qualification. However, minimum GATE cut-off doesn't guarantee shortlisting for test / interview.

The requirement of GATE score is waived for candidates with Bachelor's Degree in Engineering from the Centrally Funded Technical Institutes (CFTIs) with CGPA of 8.0 and above (out of 10) in line with MHRD (now MoE) letter no. 17-2/2014 -TS. I dated February 18, 2015 and other IITs. Such candidates are required to appear in the interview for selection.

1.1.2 ME/ M Tech / M Phil /equivalent degree with **GATE qualification not older than 05 years from the last date of submission of application / NET qualification.**

Age Limit: Please refer to General Terms & Conditions - Minimum Eligibility Criteria for Admission to PhD Programme.

1.1 (b) RESEARCH FELLOW - JRF/SRF

Applicants having external fellowship from recognized Government funding agencies are encouraged to apply.

S/he receives fellowship from any government recognized funding agencies, such as CSIR, UGC, DBT, NBHM, DST (INSPIRE programme) and similar other schemes.

Institute encourages candidates with external fellowship to apply round the year. However, admission to PhD would be considered during regular cycle in July / January each Academic Year.

1.1 (c) PROJECT STAFF

This category refers to a student who, as a project staff, is working on a sponsored project (registered at R&D Unit, IIT Patna). The said project staff is eligible to be admitted in the PhD Program (of this Institute) to work on a full-time basis. The minimum remaining duration of the project at the time of admission as well as tenure of the project employee should be at least 2 years from the date of joining the PhD program. **S/he must have qualified GATE not older than 05 years from the last date of submission of application / NET qualification.**

If the project gets completed before the student completes her/his PhD, her/his category will no longer be that of Project Staff and her / his category will be converted to that of SELF-FINANCED unless s/he is granted an assistantship / fellowship from the Institute or any other funding agency.

A project staff intending to join the PhD program of IIT Patna must produce NOC on the day of interview in the prescribed format: **Form II, available on the website and annexed herewith: https://academics.iitp.ac.in/forms/Form-I-II-and-III-for-PhD-Admission.pdf** through Principal Investigator (PI), Head of the Department and Dean/ Associate Dean, R&D with suitable endorsement.

1.2 SPONSORED (FULL-TIME)

A candidate in this category is sponsored by a reputed industry, R&D organization, academic institution (universities/colleges), government organization, PSUs and autonomous bodies (central / state) for research and career advancement. The Institute does not provide any assistantship/fellowship to such a candidate.

Candidate in Sponsored category must be a regular employee of the sponsoring organization (of repute) with a minimum of two-years job experience in the respective field. Candidate in this category must be a regular employee of her / his organization with at least two years of professional experience in the respective field. **The work-experience of minimum two years is essential with current employer.**

A student in this category is therefore a professionally employed person, who pursues PhD while continuing her / his services. The candidate has to work full time in Institute to obtain the degree for a period of 3 years.

An intending sponsored candidate must produce NOC on the day of interview in the prescribed format: Form I, available on the website: https://academics.iitp.ac.in/forms/Form-I-II-and-III-for-PhD-Admission.pdf and annexed herewith.

1.3 EMPLOYED & PART-TIME

A candidate in this category is a regularly employed person (including the staff of IIT Patna), who pursues the PhD program, while continuing the duties of her / his service. The Institute does not provide any assistantship / fellowship to such a student. The minimum residential requirement is

one or two semester(s) depending on the completion of mandatory course work required for PhD students. Candidate in Employed and Part-time category must be a regular employee of her / his organization with at least two years of professional experience in the respective field. **The work-experience of minimum two years is essential with current employer.** NOC must be produced on the day of interview in the prescribed format: **Form III**, **available on the website: https://academics.iitp.ac.in/forms/Form-I-II-and-III-for-PhD-Admission.pdf** and annexed herewith.

Candidate having experience for more than 10 years may be given relaxation up to 5% in qualifying degree as specified in clause B.2.1, B.2.2, B.2.3.

Candidates selected for Sponsored, and Employed & Part-time categories can have the opportunity to complete the mandatory course-work in online / hybrid mode with examination in physical mode in the Institute campus with prior approval from the competent authority of the Institute.

B. GENERAL TERMS & CONDITIONS: MINIMUM ELIGIBILITY CRITERIA FOR ADMISSION TO PhD PROGRAMME:

B.1 AGE LIMIT:

- In all the disciplines, the upper **age limit is 28 years (B. Tech. / B.S. / B.E. / M. Sc. / MA / MCA / MBA) and 32 years (M. Tech. / M.E./ M.S. /M. Phil.)** to be calculated as on the last date of application and is applicable **only** for candidates applying in Regular and Full-time category, as Teaching Assistant (TA).
- **Upper age limit is relaxed up to 05 years in case of candidate belonging to Schedule Castes / Schedule Tribes, OBC, Women and PwD candidates.**
- For Research/ project fellows, age limit will be as per the funding agency norms. In absence of any age criteria, the Institute norms will be followed.

B.2 MINIMUM EDUCATIONAL QUALIFICATIONS:

B.2.1 PhD in Engineering / Science

For admission to the PhD Programme in any Department, a candidate must satisfy one of the following criteria:

B.2.1.1 Candidates having M. Tech. / M.E. degree in Engineering / Technology, with a minimum CPI of 6.5 or 60% of marks.

B.2.1.2 Bachelor's degree in Engineering / Technology in a relevant branch / area with a minimum CPI of 6.5 or 60% of marks.

B.2.1.3 Master's degree in Science in a relevant area with a minimum CPI of 6.5 or 60% of marks.

B.2.2 PhD in Science

For admission to the PhD Programme in Science Departments, a candidate must satisfy one of the following criteria:

B.2.2.1 M. Phil. or Master's degree in Science in a relevant area with a minimum CPI of 6.5 or 60% of marks.

B.2.2.2 Master's degree in Engineering / Technology in a relevant area with a minimum CPI of 6.5 or 60% of marks.

B.2.2.3 Bachelor's degree in Engineering / Technology in a relevant branch / area with a minimum CPI of 6.5 or 60% of marks.

B.2.3 PhD in Humanities and Social Sciences

For admission to the PhD Programme in the Department of Humanities and Social Sciences (HSS), a candidate must satisfy one of the following criteria:

B.2.3.1 M. Phil. or Master's degree in Arts/Commerce/Science/ Management/ Business Administration in a relevant area with a minimum CPI of 6.5 or 60% of marks.

B.2.3.2 Master's degree in Engineering / Technology / Design in a relevant area with a minimum CPI of 6.5 or 60% marks.

B.2.3.3 Bachelor's degree in Engineering / Technology in a relevant branch / area with a minimum CPI of 6.5 or 60% marks.

B.2.4 Direct Admission

For candidates in Sciences, Engineering & Technology:

The Institute may admit exceptionally bright candidates as Full-time (Teaching Assistants) by direct admission (i.e., without written test). Direct admission to PhD program for exceptionally bright candidate is permissible subject to fulfilment of the following conditions:

B.2.4.1 B.Tech. / B. S. from the CFTIs, graduated within the last five years, with a degree in the respective discipline with a **CPI/CGPA of ≥ 8.0**

B.2.4.2 Masters from the IITs / IISc, graduated within the last five years, with a degree in the respective discipline with a **CPI/CGPA of ≥ 8.5**

Such a candidate has to apply online. Additionally, an email claiming candidature for direct admission must be sent with scanned copy of the supporting documents to **phd_admissions@iitp.ac.in**

There would be no admission in direct admission category in Department of Humanities and Social Sciences.

NOTE

- **CPI will not be converted into percentage of marks if the degree awarding Institute provides marks in CPI system or vice versa. Their admission will be based on the CPI or Percentage of Marks awarded in the transcript.**
- **Candidates should note that if both CPI and percentage are indicated in transcript/marksheet of the qualifying degree then only CPI shall be considered for determining eligibility.**

C. RELAXATION FOR SC/ST CANDIDATES:

Eligibility criteria will be relaxed by 5% marks or 0.5 CPI for SC/ ST applicants.

D. RESERVATIONS:

The reservation of seats in admissions for SC, ST, OBC, EWS categories and for persons with disability (PwD) will be as per Government of India rules. OBC (Non-creamy layer) candidates

will have to produce latest certificate (issued on or after 01.04.2025) and self-declaration statement as per formats indicated at **Annexure-I and II available on the website:** https://academics.iitp.ac.in/files/obc_certificate_self_declaration.pdf

Reservation Policy is not applicable for Sponsored (Full-Time) and Employed and Part-Time.

E. FINANCIAL SUPPORT

The Institute assistantships will be available to eligible (Indian) students as per prevailing (MoE, GoI) norms, as applicable from time to time. At present total emoluments are **Rs. 37,000/- per month for first two years and Rs. 42,000/- per month for subsequent years (governed as per MoE letter F.No. 32-18/2023-TS-l, dtd. 13.09.2023).**

Assistantships from external funding organizations will be available as per terms and conditions of the concerned funding organizations. Students receiving assistantships from the Institute or fellowships from any other funding agencies are required to perform academic duties as per prevailing norms.

The continuation of the assistantship / fellowship is subject to satisfactory performance of the assigned duties and satisfactory progress of the student in the PhD Programme.

F. WITHDRAWAL POLICY

One should not drop / leave the programme before course completion without valid reasons thereof. Selected candidates shall have to submit an undertaking / declaration at the time of admission for refunding fellowship / assistantship drawn from the Institute in case of resignation from the program. In case of withdrawal, the refund of fees will be governed by the prevailing Institute rules / policy.

G. HEALTH CARE POLICY

Health services for enrolled students during their tenure will be governed by the terms and conditions of insurance policy procured by them at the time of admission which shall be renewed on yearly basis. OPD inside the Institute Health Center is available for all students in accordance with the Institute policy framed from time to time in this matter.

H. ACCOMMODATION POLICY

Institute does not guarantee hostel accommodation inside the campus. However, accommodation may be provided on first come first served basis, subject to availability of vacant rooms in the hostels. Teaching Assistants are not eligible for HRA even in case of non-availability of Hostel Accommodation.

I. APPLICATION PROCEDURE (please go through it very carefully):

Firstly, application fee must be paid before proceeding for online application. The details of application fee are given below:

Category of Admission		**Application Fee**
Teaching Assistant / Research Fellow / Project Staff	GEN / EWS / OBC-NCL	Rs. 1,000/-
	SC / ST / PwD / Women / Transgender	Rs. 500/-
Sponsored (Full-Time) / Employed & Part-Time	Not Applicable	Rs. 1,000/-

The application fee should be paid online through SBI Collect. Application fee shall not be refunded.

Link for payment: https://www.onlinesbi.sbi/sbicollect/

Detail of Payment Procedure is attached as **Annexure – I**

After the payment, a reference/journal number will be generated, which must be mentioned in the application form and the printed e-receipt of payment must be uploaded.

Only after the above step and noting down reference/journal number generated through payment, candidates are required to use the following link to fill and submit application form online. Please read complete advertisement very carefully before applying online. To avoid internet congestion, candidates are advised not to wait for the last date of application.

Link for online application (should be accessed after payment of application fee): **https://ais.iitp.ac.in/phd_admission/phd_form/index.php**

- **After successful submission of online application, candidates shall receive application details on their respective registered email address.**
- **The candidates are required to take printout of the application details received in their email after submitting online application. This printout along with self-attested copies of mark sheets & certificates (from class X to highest degree obtained / appeared), caste certificate (if applicable), GATE / NET / relevant certificates related to any fellowship, experience certificate, NOC, other testimonials (both sides), and printed e-receipt of online payment must be produced on the day of test / interview, failing which the candidature is liable to be rejected.**
- **Candidates, applying for more than one Department, must submit a separate application with separate payment of application fee. Fresh fee payment is required for each application.**

If any of the prescribed documents (as mentioned above) is not produced on the day of test/interview, the candidate may not be allowed to attend test/interview.

Please note that depending upon the situation, above documents can be asked any time before the day of interview.

Candidates are NOT required to send application by post.

No call letter will be sent by post. The candidates must check their registered email and Institute website regularly for important information. On the day of test / interview, a candidate must produce her / his valid original Identity card.

J. SELECTION

The Institute reserves the right to call a limited number of candidates for test / interview, based on performance in GATE / NET, grades/marks in the qualifying examination, shortlisting criteria, etc. **Merely fulfilling minimum eligibility criteria does not guarantee call for test / interview.**

Important Dates:

Start Date of On-line Application	**: 22/10/2026**
Last Date of On-line Application	**: 18/11/2026 (Till 11:59 PM)**
Issuance of Call Letter by the Dept. through Email	**: 23/11/2026**
Examination Date Window	**: December 01-08, 2026**
Result Release Date (Tentative)	**: 14/12/2026**
Issuance of Offer Letter (Tentative)	**: 18/12/2026**

Helpline: Please note that no correspondence / query shall be entertained regarding correction of mistake in the submitted application, details already available in the advertisement and irrelevant matters. Issues / problems should be categorized strictly as provided in the following table and the

corresponding email id / telephone number mentioned against the issues may be used ONLY for resolution.

Sl. No.	Issues	Email/Phone no.
1.	**Technical issues regarding online applications**	**Email: acad_techsupport@iitp.ac.in**
2.	**Academic matter**	**Email: phd_admissions@iitp.ac.in** **Tel.: 06115-233-684/697**
3.	**Fee -payment**	**Email: arfa@iitp.ac.in** **Tel.: 06115-233-062**

Note: The above information is not the complete set of Rules & Regulations for the PhD programme of IIT Patna.

Legal Jurisdiction: The court at Patna alone shall have the jurisdiction to settle and decide all matters and disputes related to the above referred admission process.