

राष्ट्रीय प्रौद्योगिकी संस्थान पटना

NATIONAL INSTITUTE OF TECHNOLOGY PATNA

शिक्षा मंत्रालय, भारत सरकार के अधीन एक राष्ट्रीय महत्व का संस्थान (An Institute of National Importance under Ministry of Education, Govt. of India)

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<u>संदम / Ref.:NITP /Dy. D /16 /2022</u>

दिनांक / Date : - 06.05.2022

ADMISSION NOTICE

ADMISSION NOTICE for Ph.D Programme – Odd Semester (July-Dec' 2022)during the session 2022-23 under Full Time /Part-Time/Sponsored Scheme And Selection for JRF/SRF positions for externally funded projects currently at NITPatna

National Institute of Technology Patna invites application for admission to Ph. D Programme through Institute Admission Test and/or Interview during Odd Semester (July-Dec' 2022) for the Session 2022-23 in the following departments as detailed below:

De	partments	Doctoral Program: Area of Specialization
1.	Architecture and Planning	Architecture, Urban Planning, Rural Planning, Climate change, Regional Planning, Architectural Conservation, Heritage Management, Sustainable Architecture, Structural forms in Architecture, Environmental Planning, Vernacular Architecture, Housing
2.	Civil Engineering	Structural Engineering, Transportation Engineering, Hydraulics and Water Resource Engineering, Environmental Engineering, Geotechnical Engineering, Remote Sensing & GIS
3.	Computer Science & Engineering	Artificial Intelligence, Machine Learning, Deep Learning, Pattern Recognition, Recommender System, Big Data, Data Mining, Network and Information Security, Multimedia Security, Threat Modelling, Biometric, Social Networks, Computational Geometry, Data Network, Wireless Sensor Networks, Internet of Things Bioinformatics, Semantic Web, Natural Language Processing, Cloud Computing, Knowledge Engineering, Software Engineering, Blockchain Technology and Cyber Security, Distributed Systems, Cloud Computing, Fog Computing, Security in edge Computing, IoT Security, Access Control, Privacy Models in Cloud.
4.	Electrical Engineering	Power system optimization, Power System Dynamics and Control, High Performance Computing in Power System, Power System Protection, Power Market, Smart Grids, Micro Grids, Power Electronics & Electric Machine Drives, Renewable Energy, Semiconductor devices, Solar Cells, Photovoltaic Systems, Electric Vehicles, Intelligent Instrumentation & Embedded Systems, Robotics, Discrete-time Systems, System Identification, Linear and Nonlinear Control Systems, Robust Control, Process Control, Optimal Control, Advanced Control Techniques.

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Communication Engineeringmaterials and Meta-surfaces, Antenna Engineering, VLSI, Speech Processing, Biomedical Signal processing, Wireless On Networks, Network Security, Optical communication.6. Mechanical EngineeringDesign, Thermal, Production, Manufacturing, Industrial, Sol Dynamics, Renewable Energy, Surface Engineering, Dynamic Power System, Operation Management.7. ChemistryChemistry, Applied Chemistry, Material science & Technolo Bioinformatics, Environmental Science, Analytical Chemistry	Communication and lid Mechanics, Gas s and Control, Fluid gy, Bio-Chemistry,
Engineering Networks, Network Security, Optical communication. 6. Mechanical Engineering Design, Thermal, Production, Manufacturing, Industrial, Sol Dynamics, Renewable Energy, Surface Engineering, Dynamic Power System, Operation Management. 7. Chemistry Chemistry, Applied Chemistry, Material science & Technolog Bioinformatics, Environmental Science, Analytical Chemistry	id Mechanics, Gas s and Control, Fluid ogy, Bio-Chemistry,
6. Mechanical EngineeringDesign, Thermal, Production, Manufacturing, Industrial, Sol Dynamics, Renewable Energy, Surface Engineering, Dynamic Power System, Operation Management.7. ChemistryChemistry, Applied Chemistry, Material science & Technolo Bioinformatics, Environmental Science, Analytical Chemistry	s and Control, Fluid ogy, Bio-Chemistry,
EngineeringDynamics, Renewable Energy, Surface Engineering, Dynamic Power System, Operation Management.7. ChemistryChemistry, Applied Chemistry, Material science & Technolo Bioinformatics, Environmental Science, Analytical Chemistry	s and Control, Fluid ogy, Bio-Chemistry,
Power System, Operation Management. 7. Chemistry Chemistry, Applied Chemistry, Material science & Technolog Bioinformatics, Environmental Science, Analytical Chemistry	ogy, Bio-Chemistry,
7. Chemistry Chemistry, Applied Chemistry, Material science & Technolo Bioinformatics, Environmental Science, Analytical Chemistr	
Bioinformatics, Environmental Science, Analytical Chemistr	
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Nano Technology, Chemical Science & Technology, Polyme	r Science &
Technology, Pharmaceutical Science	
8. Humanities and Economics: Agriculture, Labour & Employment, Development, Devel	nent Studies, Rural
Social Science Development, Finance, Sociology	* 3
9. Mathematics Analysis, Algebra, Topology, Differential Equations, Numerica	al Analysis, Fluid
Dynamics, Nonlinear Dynamics, Mathematical Biology, Nun	nerical Methods for
PDEs, Stochastic Modelling in Biology	
10. Physics Solid State Physics, Experimental Condensed Matter Physic	
Fuel Cells, Ceramic Membranes, Multifunctional Materia	
Inorganic and Organic Sensing Materials, Biophysics,	
Optoelectronic Devices, Magnetism in Strongly Correlat	ed Systems, Defect
Induced Magnetism by Ion Beam, Ion Matter Interaction.	
Quantum Foundations, Quantum Information and Crypto	
Physics, Thermodynamic Information Geometry, Statistical M	echanics.

JRF/SRF for externally funded projects running at the Institute will be selected through this process.

CATAGORIES

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Applicants will be eligible for admission to the Full- Time / Part-Time Ph. D. Programme of the Institute. Selection process, Admission Fees, requirement for awarding PhD. etc. will be guided by PhD regulation of NIT Patna.

The applicants seeking admission to the Ph.D. programme shall be classified under any one of the following categories.

(i) Full Time Ph.D Programme:

With Research Assistantship.

With direct financial support from Govt. / Semi Govt. agencies such as CSIR, UGC, DST, DAE, etc.

Full time Sponsored employee of PSU, Government department, R&D organization, Industries of repute, Faculties of the Educational institutions and sponsored defence personnel with a minimum relevant experience of 2 years may be considered for admission as a sponsored full-time research scholar.

Sponsored applicants will be eligible for admission, if they are treated by their employers as ondeputation with their full salary and allowances and are relieved from their organization/ institute for completion of PhD programme.

The sponsored candidates are exempted from GATE/ NET qualification, but they should possess the minimum entry qualification fixed by the institute as per eligibility criteria for full time candidate selection. These candidates may be exempted from the Screening test for admission. However, they have to undergo through the technical interview to access their knowledge required in the field of their research interest.

Sponsored applicants have to submit NOC from their employer and shall be considered against supernumerary seats, and shall not be counted against open seats notified for admission to the program.

Sponsored candidates will not be eligible for any Institute Research Assistantship.

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(ii) Part Time

Sponsored employee of PSU, Government department, Research/ Development organization, Industry of repute, Educational institutions Faculty, employees under MoU, sponsored defence personnel etc.

The sponsored candidates are exempted from GATE/ NET qualification, but they should possess the minimum entry qualification fixed by the institute as per eligibility criteria for part time programme. These candidates may be exempted from appearing at screening test for admission. However, they have to appear in the selection interview to assess their knowledge required in the field of their research interest.

Sponsored applicants have to submit NOC from their principal employer and shall be considered against supernumerary seats, and shall not be counted against open seats notified for admission to the program.

The Part time Ph.D programme candidate(s) has to continue to discharge their assigned duties along with their research work.

Such candidate will not be eligible for any Institute Research Assistantship.

(iii) JRF/SRF working at NIT Patna

JRFs / SRFs who fulfill the eligibility criteria and are working in an externally funded research project running in the Institute, provided such projects must not have less than one year tenure left on the date of registration in the Programme are eligible for Admission in Ph.D programme in the respective domain at that Department as a part time research scholar under the supervision of the concerned Principal Investigator (PI) of the project.

Such a candidate should submit a no-objection certificate from the Principal Investigator (PI) of the project. They will be required to attend normal duties assigned to them by the PI of the research project and attend classes to complete the course work requirements. They are also required to continue the work of Research Project till the duration for which they were appointed in the project, failing which their admission in Ph.D Programme will stand cancelled.

He / She will not be eligible for any Institute Research Assistantship even after completion of research project. Such admission will be taken against supernumerary seats only. Such candidate will be guided by PhD Regulation of the Institute. Admission committee of the department will send the recommendation for admission to Dean (Academic). In case, he/she left the project during the project duration then his/her admission will be terminated without assigning any reason.

(iv) Non-PhD regular Faculty and Faculty appointed on consolidated salary of NIT Patna can be admitted to Ph.D programme as a Part-time candidate to the Doctoral Program against supernumerary seat provided they fulfill minimum eligibility of qualification and will be governed by the Regulation of the Doctoral Program. They will be required to attend normal duties assigned to them by the Head of Department and attend classes to complete the course work requirements.

He / She will not be eligible for any Institute Research Assistantship.

Selection for JRF/SRF

There are sufficient numbers of additional positions for JRF/SRF in externally funded project currently under execution at the Institute.

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Candidates who fulfill the minimum eligibility criteria will be eligible for selection for JRF/SRF position through interview of this process.

Those candidates who could not qualify the written test exam (screening test) may also appear for JRF/SRF position thorough interview (see admission schedule for Ph.D programme-Odd Semester (July-Dec 2022) during the session 2022-23).

SEAT MATRIX / RESERVATION DETAILS							
Department	Seat Allotted	UR	EWS	OBC- NCL	SC	ST	РН
ECE	15	6	2	4	2	1	1(Horizontal)
Electrical Engineering	14	6	1	4	2	1	
CSE	16	7	2	4	2	1	1(Horizontal)
Civil Engineering	20	8	2	5	3	2	
Mechanical Engineering	16	7	1	4	3	1	1(Horizontal)
Architecture & Planning	8	3	1	2	1	1	1 (Horizontal)
Mathematics	6	2	1	2	1	0	
Physics	6	2	1	2	1	0	1 (Horizontal)
Chemistry	6	2	0	2	1	1	
HSS	6	3	0	2	1	0	l (Horizontal)
Total	113	46	11	31	17	8	6

ELIGIBILITY CRITERIA FOR SELECTION

Candidates with following qualification will be eligible for admission to the Ph. D. Programme of the Institute.

- (i) M. Tech./ M. E./ M. Arch/ M. Planning/M. Design/M. Sc./M. Com./ MBA/MA or equivalent degree in <u>relevant</u> and related discipline, with at least 6.5 CGPA (in the scale of 10) or 60 percent marks in aggregate from a recognized technical institute or university.
 - Candidates who have taken admission in M. Tech/ M.E/ M. Arch/ M. Planning/M. Design or equivalent programme in relevant discipline on the basis of GATE score and have obtained the degree are required to produce a proof of having qualified GATE at the time of submission of application form.
 - Candidates who have taken admission in M. Tech/ M.E/ M. Arch/ M. Planning/M. Design or equivalent programme in relevant discipline without GATE score and have obtained the degree are required to produce a proof of having valid GATE score at the time of submission of application form.
 - Candidates having M. Sc./ M. Com./ MBA/ MA or equivalent degree in relevant discipline are required to produce a proof of having valid GATE score at the time of submission of application form.

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- The sponsored candidates are exempted from GATE examination.
- (ii) B.Tech/BE/B.Arch or equivalent degree in relevant discipline with First class, if not specifically mentioned by the Institution, then 60% marks or 6.5 CGPA with a valid GATE score.
- (iii) The minimum CGPA/ marks percentage shall be relaxed by 0.5 CGPA or 5 percent in case of candidates belonging to the SC/ ST/PwD categories in all cases.

Reservations

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As per Government of India rules.

Admission Procedure and Other Details:

Admission to the Ph. D Programme shall be made by the Institute based on minimum eligibility criteria for the programme and selected after evaluation of the candidate in Screening Test and/or selection Interview conducted by the respective Admission Committee.

Candidates' name with application number, fulfilling minimum eligibility criteria for admission to the respective department and programme will be displayed on the Institute website as per admission schedule.

Admission Committee of the respective department will conduct screening Test and/or Selection Interview. The final selection will be done after Selection Interview.

<u>A merit list will be prepared based on selection interview only. Admission will be strictly based on merit subject to verification of documents and original certificates.</u>

Important Information for Candidates

- i. Once registered under Part Time Ph.D Programme at the Institute, conversion of candidature from Part Time to Full Time is not permissible.
- ii. A candidate can apply online for more than one department, if he/she is eligible for that discipline. However, he/she has to apply separately.
- iii. A candidate is required to appear for Admission Test and/or Interview separately for all departments at the Institute in physical mode for which he/she has applied.
- *iv.* Application number allotted to candidates will be used for any future reference.
- v. No separate acknowledgment or call letter will be sent by the institute for attending the Admission Test at the Institute in physical mode.
- vi. As no separate Admit Card is issued for the admission Test, hence the candidates are to bring any standard Photo I-Card (in Original) with a photocopy thereof, such as, Aadhaar Card, PAN Card, EPIC, Driving License, I-card issued by their Employer, or any Govt./ Public Sector Organization etc.
- vii. Candidates reporting without any standard I-Card (in original) as stated above shall not be allowed to appear at admission Test/Selection Interview.
- viii. Candidates must report in the Institute at least 30 minutes before start of admission Test else

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they will not be allowed to appear at the written Test.

- ix. Sponsored candidate may submit their NOC till admission date.
- x. Candidates are advised to visit the Institute website <u>www.nitp.ac.in</u> for regular updates.
- xi. The name of the short listed candidates eligible for the Screening test / Interview shall also be displayed on the Institute website.
- xii. A candidate shall be considered for Screening test / Interview even if the result of the qualifying examination is awaited. If selected, such candidates will be allowed to join the programme provisionally. He/she is required to submit a certificate from their Principal/Registrar stating that the candidate has completed all course requirements for obtaining the qualifying degree for admission in Ph. D Programme, at the time of written examination/ Interview.
- xiii. Admission Screening Test questions only for Full Time Institute Fellowship: The qualifying Screening test marks is 40% of the full marks of the test for General and OBC candidate and 35% of the full marks of the test for SC/ST/PwD candidates. Syllabus for screening test will be Syllabus of GATE/NET Exam of respective discipline.
- xiv. Interview: Candidates based on screening test will be shortlisted for the interview, and are required b appear at Interview. Candidate other than Full Time Institute Fellowship category such as with direct financial support from Govt. / Semi Govt. agencies e.g. CSIR, UGC, DST, DAE, etc. / Sponsored / Part Time / JRF, SRF working at NIT Patna / Non-Ph.D regular Faculty and Faculty Appointed on Consolidated salary of NIT Patna will be called directly for selection interview. In Selection Interview, his/ her depth of the knowledge in domain/Research subjects and aptitude for research will be tested. Their original documents, academic records and credentials will be verified before the interview. If found not eligible for admission, he/she shall not be permitted to appear at the interview and his/her candidature shall stand cancelled. A candidate recommended for rejection by Interview Board is summarily rejected from admission in the program.
- xv. Merit list: The merit list shall be prepared by the admission committee based on the Selection Interview Marks and availability of seat. Cut off marks for admission cannot be less than 50% of full marks for Selection Interview. Selected candidates shall be notified on Institute website by the Academic Section.

The selected candidates are required to report for admission on due date and time. No separate selection letter will be sent to any candidate.

xvi. Extension of time for admission reporting shall not be allowed. If a candidate fails to report for admission by the due date, his/ her admission is cancelled.

xvii. In case of sponsored candidate, an advance copy of the application may be sent by the candidate.

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Admission Test details and marks distribution for preparation of merit list

(a)	Screening Test:	Full Marks :100
(b)	Selection Interview (To be conducted by the Department/ Centre)	Full Marks: 100

Scholarship & Financial Assistance for Ph. D. Programme:

Institute Research Fellowship will be available to the eligible students as per MoE, GOI norms. The Period and amount of research fellowship shall be as per notification of the competent authority from time to time. Selected candidate is required to execute an undertaking/agreement bond mentioning that they will refund the stipend/scholarship/assistantship received from the Institute in the case of leaving the programme without its completion, irrespective of the reasons at his/her end on the prescribed format.

Note: The scholarships from any other agency/ organization are governed by rules and regulation of funding agency only, and students shall be governed by their rules only.

Documents required for verification during the Screening Test, interview and admission

- (i) The candidates are required to bring any standard Photo I-Card (in original) with a photocopy thereof, such as Aadhaar Card, PAN Card, EPIC, Driving License, I-Card issued by their Employer, or any Govt./ Public Sector Organisation etc. at the time of Screening Test.
- (ii) The candidates are required to bring following documents at the time of interview:
 - a. High School Certificate in original.

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- b. Mark sheets of qualifying examination in original.
- c. Character Certificate issued by the Head of the Institution last attended/ from employer.
- d. Certificate of sponsorship in the prescribed format (if applicable).
- e. No Objection certificate from parent employer (if applicable).
- (iii) The candidates are required to submit following self-attested documents at the time ofinterview:
 - a. Downloaded Application form along with proof of on line payment
 - b. Photocopy of High School Certificate
 - c. Photocopies of all Mark sheets
 - d. Certificate of sponsorship in the prescribed format (if applicable).
 - e. A photocopy of GATE/NET score card (if applicable)
 - f. A photocopy of the certificate of Caste (if applicable).
- (iv) The candidates are required to bring following documents at the time of admission (If any document(s) are missing, your admission will stand cancelled):
 - a. Passport size Photographs (4 Nos.).
 - b. Proof of Payment for admission fee.
 - c. Two set of Self attested copies of all the documents listed at S.No. (ii) along with original certificates/documents
 - d. Admission letter if any issued by the Institute/ verified document/ Admit Card used forAdmission Test.
 - e. Migration Certificate

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Fee Structure (for more details visit_ http://www.nitp.ac.in/uploads/Fee Structure All.pdf

Programme	1 st Semester at the time of Admission
Ph.D (Regular)	Rs. 42,950/-
Ph.D (Part-Time)	Rs. 42,950/-

Application Procedure

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- All candidates are advised to apply only through online on NIT Patna website http://www.nitp.ac.in on or before 22nd June 2022, 11:00AM. Application fees need to be paid online through Institute website only.
- 2. After submission of online application, applicant should download the printed application for future reference.
- 3. Application fee is of Rs. 1500/- for General/ OBC/ EWS/Sponsored category and Rs. 750/- for SC/ ST/ PwD.
- 4. Applicants from SC/ ST/ PwD category must enclose Certificate issued by competent authority to claim relaxation in application Fee.

A	lmission Schedule for Ph. D Program –Od	d Semester (July-Dec'20 session: 2022-23	22) during the
S. No.	Admission Activities	Important dates	Days
1.	Last date of online application	22 nd June'2022	Wednesday
2.	Display of list of eligible candidates for Admission Test on institute' website	24 th June' 2022	Friday
3.	Admission Test	28 th June' 2022	Tuesday
	Result of Written Admission Test	30 th June' 2022	Thursday
	Interview for eligible candidates (Full Time/Part Time/JRF/SRF)	04 th - 07 th July' 2022	Monday to Thursday
4.	Merit list of selected candidates	12 th July' 2022	Tuesday
5.	Admission and Registration in 1 st Semester	22 nd – 23 rd July' 2022	Thursday to Friday
6.	Commencement of Classes	25 th July' 2022	Monday

NOTE: Institute reserves the right to vary the number of seats or cancel the admission process without assigning / informing any reason therefore.

The Institute reserves the right to refuse admission to any candidate without assigning any reason. All disputes are subject to Patna High Court only

For any query, please contact on:

Phone: Office: (0612) 237-1929, 237-0843, Ext. 172; Fax: (0612) 2670631 Institute Web Site: <u>www.nitp.ac.in</u> Email ID: <u>abhay.ar@nitp.ac.in</u>

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Dy. Director

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