



# **INFORMATION BROCHURE**

**For Admission to Ph.D. Programme:  
Full-Time & Part-Time**

**January 2025 Session**



**NATIONAL INSTITUTE OF TECHNOLOGY  
TIRUCHIRAPPALLI – 620 015**

**[www.nitt.edu](http://www.nitt.edu)**

<b>S. No.</b>	<b>Particulars</b>	<b>Page No.</b>
1.	Important Information	3
2.	Important Dates	6
3.	Ph. D. Categories, Description, Requirements, Admission Process	6
4.	Additional Eligibility Criteria for Various Departments	10
5.	Selection Procedure	13
6.	Miscellaneous Information	13
7.	Course Work	14
	How to apply	14
	Annexure – areas of specialization	16
	Form for sponsorships for part-time Applicants	19
	Frequently Asked Questions (FAQs)	23

## 1. IMPORTANT INFORMATION

Applications are invited for admission to the Ph.D. Programme in the following categories:

### (a) Full-Time:

- (i) Half-time Research Assistantship (HTRA)
- (ii) Externally Funded
- (iii) Non-Stipendiary

### (b) Part-Time: In-Service

- (i) Internal and
- (ii) External

for the session starting Jan 2025 in all disciplines of Engineering & Architecture, Sciences (Mathematics, Physics, Chemistry), Computer Applications, Management, and Humanities & Social Sciences.

Admission to the applicants in the reserved category will be done as per the notification of the Government of India.

Applicants must apply through the online portal

<https://nittadm.samarth.edu.in/2024> only.

**Applicants are advised to read this Information Brochure carefully before applying online.**

### **Educational qualifications (basic eligibility criteria) for Ph.D. Admission**

1. **LATERAL (REGULAR) APPLICANTS:** Applicants with masters' degrees (including those currently in their final semester and expecting degrees awarded in 2024) (i) in the GEN / GEN-EWS / OBC-NCL category must possess 60% or above aggregate marks (equivalently, CGPA at least 6.5/10), and (ii) in the SC / ST / PwD category must possess 55% aggregate or above aggregate marks (equivalently, CGPA at least 6.0/10.0), in both UG and PG degrees for admission to the Ph.D. program. In addition, a qualified GATE or an equivalent National level test score obtained at some point of time in the past is mandatory for HTRA category of Architecture, Sciences (mathematics, physics, chemistry), Computer Applications, Management, and Humanities & Social Sciences disciplines. However, GATE / equivalent National level test score is not mandatory for HTRA category of Engineering disciplines alone (National Level Ph.D. entrance test will be conducted at NIT, Tiruchirappalli as an alternative to the mandatory GATE score criterion for Academic Year 2024-25 for HTRA candidates in Engineering Disciplines for LATERAL (REGULAR) APPLICANTS alone).

GATE / equivalent National level test score is not mandatory for non-stipendiary, project and Part-Time (Internal and External) category of all disciplines. However, such candidates have to appear for National Level

Ph.D. entrance test to be conducted at NIT, Tiruchirappalli.

### **General instructions for Ph.D. admission**

1. Selection of candidates will be based on an initial screening of the applications, a written test and the performance in the interview/counseling to be conducted offline/online for this session of admission for all categories. Only the shortlisted applicants shall be notified on the Institute's website at every stage.
2. Mere fulfilling of eligibility requirements does not ensure shortlisting for the written test and interview/counseling. Institute reserves the right to restrict the number of candidates to be called for the written test / interview / counseling process. Depending on the number of applications received, the Institute / Department(s) may set the criteria higher than the minimum eligibility requirements for shortlisting applicants for offline/online written test / interview / counseling process.
3. Mere appearing in the written test / interview /counseling process does not guarantee final selection. It is the candidate's sole responsibility to be present in the written test / interview / counseling process on the scheduled date and time. Institute shall not entertain any request for waiver/change of schedule under any circumstances.
4. Admission shall be offered subject to the availability of seats with institute fellowships, fellowships from other funding sources and sponsored & consultancy projects, faculty members in the respective specializations, and other administrative procedures.
5. The admission shall be purely provisional subject to the confirmation that the prescribed eligibility conditions to be satisfied by the candidates, including verification of original qualifying degree certificates and other related documents.
6. A limited hostel accommodation is available.
7. **Applicants MUST upload the following scanned documents while submitting the Ph.D. Application.**
  - 10<sup>th</sup> and 12<sup>th</sup> Marks Sheet.
  - Passport-size photograph.
  - Signature of the applicant.
  - Transfer Certificate/Migration certificate
  - UG mark sheet of the last semester / Consolidated mark-sheet of the qualifying degree. Applicants awaiting the final result must upload all their previous semesters' mark-sheets.
  - PG Mark-sheet of the last semester / Consolidated mark-sheet of the qualifying degree. Applicants awaiting the final result must upload all their previous semesters' mark-sheets.
  - Category Certificate (OBC-NCL/SC/ST), if applicable. An affidavit can be uploaded for having applied in case the certificate is not yet received.

- Applicants from Economically Weaker Section (GEN-EWS) need to submit EWS certificate issued by the Competent Authority in the prescribed format, if applicable. An affidavit can be uploaded for having applied in case the certificate is not yet received.
- PwD Certificate, if applicable. An affidavit can be uploaded for having applied in case the certificate is not yet received.

**Supporting documents to be uploaded:**

**Full-time:** Proof of Research publications(if any)/research proposal (if any) and statement of Purpose (SoP) as a single file.

**Part-time:** NOC, Sponsorship certificate, Certificate from the External Research Co-Supervisor/ Research Coordinator, Proof of Research publications and statement of Purpose (SoP)/ research proposal (if any), as a single file.

If a sponsorship Certificate is not available, then attach a Self-declaration letter stating that the sponsorship certificate will be given at the time of Interview/ Admission).

8. Apart from the above-listed documents, If the Institute requires any additional information/clarification, the applicant should provide it by email.
9. The Institute shall not be responsible for wrong entries and technical error(s) while making the online application/payment of the fees.
10. Reservation for GEN-EWS / OBC-NCL / SC / ST / PwD Categories: The Institute follows the reservation policies of the MoE, Govt. of India. Certificates for GEN-EWS / OBC-NCL / SC / ST / PwD will be as per Govt. of India Rules. For OBC-NCL category, the format for certificates must be as per DoPT OM No.36036/2/2013-Estt (Res) dated 30.05.2014 and for EWS category, the format for certificates must be as per DoPT OM No.36039/1/2019-Estt (Res) dated 31.01.2019. OBC-NCL / GEN-EWS certificate must be issued on or after **April 1, 2024**.
11. If selected, all the original documents will be verified during physical reporting for admission. If anything is found wrong, the applicant's admission shall stand cancelled. Fellowships / Stipends to the full-time students shall be paid post physical verification of the documents.

Applicants are advised to visit regularly the Institute's website <https://www.nitt.edu>

<https://www.nitt.edu/home/admissions/phd/> for all updates about subsequent amendments in the advertisement and results. The Institute will make no correspondence in any form in this regard with an individual applicant.

**While filling in the online application, attention must be paid to the following:**

13. Applicants are requested to apply online only. A hard copy of the application needs to be submitted by part-time internal applicants only. More details are in later pages.
14. Applicants must fill/enter their CGPA or percentage of marks as issued by their

institute/university (do not enter equivalent CGPA or percentage of marks).

15. Online application submitted by the applicants shall be considered final and binding.
16. Requests for making corrections in the online application shall not be entertained once the final submission is made.
17. Additional instructions to the applicants with Integrated B.Tech.–M.Tech.  
Applicants with Dual Degrees are advised to fill up the 'AcademicQualification' option in the online application format as follows:
  - a. **Graduate degree:** Fill up the CGPA / % Marks up to 8<sup>th</sup> Semester (year of passing: 8<sup>th</sup> Semester Examination year).
  - b. **Post Graduate degree:** Fill up the CGPA / % Marks of the 7<sup>th</sup> to 10<sup>th</sup> Semester (year of passing: 10<sup>th</sup> Semester Examination year).
18. An applicant fulfilling minimum eligibility criteria can choose up to 3 departments he/she is eligible.
19. Each application must accompany an application fee of **Rs. 1000/-** per department for GEN/GEN-EWS/OBC-NCL applicants and **Rs. 500/-** per department for SC/ST/PwD applicants. Applications to more than one department shall be considered only upon payment of the requisite fees for each department. **Application fee is non-refundable.**
20. The fee payment (one or more departments) should be made before the last date i.e. **9<sup>th</sup> Dec, 2024 (11:59 PM).**

## 2. IMPORTANT DATES

<b>Start of Online Application (Website Open)</b>	<b>14<sup>th</sup> November 2024 (10:00 AM)</b>
<b>Last date for submission of Online Application (Website Closure)</b>	<b>9<sup>th</sup> December 2024 (11:59 PM.)</b>
<b>Tentative Schedule for Written Test / Interview</b>	<b>7<sup>th</sup> to 9<sup>th</sup> January 2025</b>

## 3. Ph.D. ADMISSION CATEGORIES & REQUIREMENTS

This call for admissions to the Ph.D. programme of the Institute is meant for the following categories

### 3.1 Full-time Research Scholar:

- a. Half-time Research Assistantship (HTRA) Scholars #

# Applicants selected for admission under this category in the architecture, engineering, management studies & science departments with valid GATE scores are also eligible to apply for the Prime Minister's Research Fellowship (PMRF). More details at <https://pmrf.in>

b. Externally Funded Research Scholars

- i. Fellowships for UGC/CSIR/DST/DAE/NBHM etc.
- ii. Sponsored Research and Consultancy Projects with individual departments/faculty.

c. Non-Stipendiary

**3.2 Part-time Research Scholar:**

- a. In-Service Internal Research Scholar (The employees of the Institute i.e., NIT, Tiruchirappalli)
- b. In-Service External (Industry/organization with R&D facility) and External (On campus) Research Scholar

**3.3. Admission Process**

Selection of applicants for admission in all the categories mentioned in section 3.1 & 3.2 will be based on an initial screening followed by their performance in the written test and interview / counselling to be conducted offline/online for this session of admissions. More details about each category are as follows:

**3.4. For the category 3.1.a, Full-Time HTRA**

The number of seats under this category in various departments, is as per the following seat distribution matrix stipulated by the Ministry of Education (MoE). Candidates selected under this category will be called as either LATERAL (those already possessing masters' degrees), or DIRECT (those who have just completed their B.E. / B.Tech. / B.Arch.) or INTEGRATED (those who are currently completing their 1<sup>st</sup> year master program (M.Tech. / M.Arch.) of the institute (NIT-T only)). All LATERAL, DIRECT and INTEGRATED candidates are admitted through the same process-screening, written-test and interview, and they compete for the admission equally.

**NOTE: DIRECT and INTEGRATED Ph.D. admissions are only for the July session and are not applicable for the January 2025 session.**

All the 17 departments of the institute admit candidates in this category, and selected candidates are eligible to receive the HTRA. It is mandatory that the recipients assist the department academic work assigned by the Head of the Department and/or Research guide for at least 8 hours per week as per guidelines issued by the MoE; this is in addition to satisfying other conditions for the award/renewal/enhancement of the fellowship. The award and renewal of the Assistantship is as per the guidelines prescribed by the ministry of education from time to time. At present, the fellowship is payable for a maximum duration of 5 years or up to the thesis submission, whichever is earlier. The monthly fellowship / assistantship is Rs. 37,000/- for the first 2 years and it will be enhanced to Rs. 42,000/- for the remaining 3 years' period subject to the performance evaluation of the Doctoral Committee. Both LATERAL and DIRECT candidates with valid GATE score are eligible for the Prime Minister's Research Fellowship (PMRF). More details at <https://pmrf.in>.

TENTATIVE SEAT VACANCY MATRIX – January 2025												
S. No.	Departments	GEN	GEN-PwD	GEN-EWS	GEN-EWS-PwD	OBC-NCL	OBC-NCL-PwD	SC	SC-PwD	ST	ST-PwD	Total
1.	Architecture	1		-		2		1		1		5
2.	Chemical Engineering	-		1		-		-				1
3.	Chemistry	1		-		-		1		1		3
4.	Civil Engineering	1	1	1		-		-		1		4
5.	Computer Applications	3			1	1		2				7
6.	Computer Science and Engineering	-	1	1		1		-		1		4
7.	Electrical and Electronics Engineering	-		1		-	1	1		-		3
8.	Electronics and Communication Engineering	-	1	1		-		-		1		3
9.	Energy and Environment	2		1								3
10.	Humanities and Social Sciences	-				-			1	1		2
11.	Instrumentation and Control Engineering	3		1		1	1	1				7
12.	Management Studies	-				1		1		1		3
13.	Mathematics	-		1		1		1				3
14.	Mechanical Engineering	-		2		-		1		1		4
15.	Metallurgical and Materials Engineering	2				-		-		1		3
16.	Physics	-		-		-		1				1
17.	Production Engineering	-		1		-		-		1		2
	<b>Total</b>	<b>13</b>	<b>3</b>	<b>11</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>10</b>	<b>1</b>	<b>10</b>	<b>0</b>	<b>58</b>

Reservation: Government of India reservation policy will be followed for GEN-EWS/OBC- NCL/SC/ST and the Persons with Disabilities (PwD) candidates.

The category tags of candidates who are eligible for various Allotted Category are as shown in the table below:

Allotted Category	Actual Category tag(s) of eligible candidates
GEN	GEN, GEN-EWS, OBC-NCL, SC, ST, GEN-PwD, GEN-EWS-PwD, OBC-NCL-PwD, SC-PwD, ST-PwD
GEN-EWS	GEN-EWS, GEN-EWS-PwD
OBC-NCL	OBC-NCL, OBC-NCL-PwD
SC	SC, SC-PwD
ST	ST, ST-PwD
GEN - PwD	GEN-PwD, GEN-EWS-PwD, OBC-NCL-PwD, SC-PwD, ST-PwD
GEN-EWS-PwD	GEN-EWS-PwD
OBC-NCL-PwD	OBC-NCL-PwD
SC-PwD	SC-PwD
ST-PwD	ST-PwD



### **3.5 For the category 3.1.b, Full-Time Externally - funded research scholars**

Under this category, admission is offered to those applicants with Masters' degrees:

- Having their own fellowships from funding agencies such as DST, CSIR, UGC, NBHM, etc., relevant to the research fields of the concerned departments. The number of seats is limited and may vary from time to time based on selection and administrative procedures.
- Project Assistants / Associates / JRFs etc., working in sponsored research and consultancy projects under the faculty of NIT-T. The number of seats is limited and may vary from time to time based on availability of projects/grants with the departments/faculty.

**3.6 Non-Stipendiary:** A very small number (decided from time to time) of seats on completely self-finance basis, for exceptionally good students possessing relevant masters' degrees, may be available **in the departments of Mathematics, Physics, Chemistry and Humanities & Social sciences**. There is no financial assistance available for these candidates. GATE / equivalent National level test score is preferred though it is not mandatory for these candidates.

### **3.7 For the category 3.2.a, Part-Time Internal (staff) In-Service research scholars**

A limited number of seats are allotted for the employees of the Institute, subject to the approval by the competent authority. Applicants for this category must submit a hard copy of the completed online application through proper channel. However, the selection procedure remains the same, i.e., screening of the application as per the norms mentioned above, followed by performance in the written test and interview.

### **3.8 For the category 3.2.b, Part-Time External In-Service research scholars**

A limited number of seats are available in all the 17 departments and the Center of Excellence in Corrosion & Surface Engineering (CECASE) for the working professionals, with masters' degrees, from Govt. R&D Organizations / Public sector / Industries / National Research laboratories.

Part-Time External (Industry/organization with R&D facility): A limited number of seats are available in all the 17 departments and the Center of Excellence in Corrosion & Surface Engineering (CECASE) for the professionals working in India, with masters' degrees, from Government and quasi-government R&D Organizations / Public sector having R & D facilities / National Research laboratories / Reputed industries/organizations (private sector/ MNCs) having well-established R&D facilities. Applicants in this category must be working in establishments equipped with necessary research and library facilities only shall be considered for admission under this category.

A committee appointed by the Director (consisting of Dean (Academic) or his nominee, Dean (R&C) or his nominee and Head of the Department) shall assess the adequacy of these facilities before recognizing the organization for the above purpose. However, the applicants must be officially sponsored by their employing organization. The candidate should have at least 3 years' experience in a regular/permanent position at the time of application. The industries / organization must have at least 5 years of its existence for patronizing candidates to part-time Ph.D. program.

The minimum residential requirement for candidates under Part-time (External-Industry / organization with R&D facility) category for undertaking course work is as

follows,

- a. The residential requirements is waived,
- b. The scholar shall report to the research supervisor / DC at least on three different occasions in every semester for official discussions and
- c. The scholar's visits to the department may be scheduled during summer / winter vacations, but only on institute working days.

Applicants to the external registration programme must provide detailed information about the research facilities available at his/her organization and a certificate from the employer that these would be available to him/her for carrying out research (Form-1). He/she should also provide the bio-data of the prospective External Co-Supervisor or Research Coordinator working in regular position who would coordinate the candidate's work at his/her organization with the principal supervisor at NIT, Tiruchirappalli (Form- 2).

Part-Time External (On Campus) category 3.2.b is also available for faculty members and professionals working in India with masters' degrees from Govt./Govt. Aided/Reputed Private Engineering Colleges/Science and Arts Colleges/Universities/ Industry/Public Sector. Regular/Full-time teachers/ employees working in these institutions will be considered for admission under this category. At the time of admission, the candidate must submit a "no objection" certificate (Form-3) and also a "relieving certificate" from the Parent institute/organization to relieve him/her to complete his/her residential requirement of one semester(minimum) to complete the mandatory course work. The candidate should have at least 3 years' experience in a regular/permanent position at the time of application. The college/organization must have 5 years of its existence for patronizing candidates to part-time Ph.D. program.

- There is no stipend/fellowship for the candidates selected under categories

3.2 a & b, i.e., Part-Time Internal and Part-Time External. These programmes are completely self-financed.

#### 4. ADDITIONAL ELIGIBILITY CRITERIA

In addition to the basic eligibility criteria described on page 3, the following are considered by various departments. Applicants may apply to more than one department based on these additional criteria.

4.1.	Department of Architecture	Applicants with Bachelor's degree in Architecture/Planning and Master's degree in Architecture / Design / Planning / Building Engineering and Management / Building technology or its equivalent.
4.2.	Department of Chemical Engineering	Applicants with B.E. / B.Tech. in Engineering / Technology followed by M.E. / M.Tech. / MS (By research)/other appropriate relevant degrees in Chemical Biochemical, Biotechnology, Petroleum, Petrochemical, Electrochemical, Polymer, Nano Technology, CFD, Bio-pharmaceutical, Industrial Safety Engineering, Thermal Power Engineering, Environmental Engineering, Energy and Environmental Engineering, Process Control, Electronics and Instrumentation, Industrial Biotechnology, Instrumentation Engineering, Process Control and Instrumentation, Control and Instrumentation, Applied Instrumentation, Control

		Systems and Instrumentation, Instrumentation and Control Engineering, Process Instrumentation or any other appropriate/relevant specialization. M.Sc. degree with specializations including Industrial Chemistry, Advanced Biochemistry, Environmental Management, Instrumentation Technology, Instrumentation and Applied Physics, Environmental Science, Biotechnology, Nano Technology, Material Science, Applied Chemistry, Applied Physics, Industrial Biotechnology, Polymer Science, Applied Electronics.
4.3.	Department of Civil Engineering	Applicants with B.E. /B. Tech. in Civil Engineering and M.E./M. Tech. specialization in Structural Engineering / Transportation Engineering / Geotechnical Engineering / Hydraulics and water resources engineering / GIS and Remote sensing under Full Time (HTRA category) For applications under part-time category specialization includes Structural Engineering / Transportation Engineering / Environmental Engineering / Geotechnical Engineering / Hydraulics and water resources engineering / GIS and Remote sensing
4.4.	Department of Computer Applications	Applicants with masters' degrees in Computer Applications or M.Sc. (Computer Science/OR&CA) with a qualified GATE score / UGC/ CSIR/ NBHM/ NET score. M.E./ M.Tech. in Computer Science & Engg. or Data Analytics with a qualified GATE score
4.5.	Department of Computer Science & Engineering	Bachelor's and Master's / M.S. (by Research) degree in Engineering / Technology in the relevant branch of study.
4.6	Department of Energy and Environment	Applicants with B.E. / B.Tech. in Engg / Tech. (Energy and Environment / Energy / Chemical / Biotechnology/ Mechanical, Electrical and Electronics Engineering) followed by M.E. / M. Tech. / MS (by-research) in Energy and Environment / Chemical / Biotechnology / Mechanical / Energy Engg. / Environmental Engg. / Energy conservation and mgmt. / Renewable Energy / Electrical and Electronics Engineering and equivalent in appropriate branch of study related to energy and environment.
4.7	Department of Electronics & Communication Engineering	Bachelor's and Master's / M.S. (by Research) degree in Engineering / Technology in the appropriate branch of study.
4.8	Department of Electrical and Electronics Engineering	B. E. or B. Tech in (Electrical Engineering, Electrical and Electronics Engineering) and Masters in any relevant filed.
4.9	Department of Humanities & Social Sciences	Masters' degrees in the relevant discipline of Humanities / Social Science / Economics / Business Administration / Commerce / Statistics with a qualified UGC / NET / CAT / AIMA / XAT / MAT score. Master's degree (M.E. / M.Tech.) in Engineering with a qualified GATE score

4.10.	Department of Instrumentation and Control Engineering	Bachelor's Degree in Engineering / Technology in the appropriate branch of study and Master's Degree / M.E. / M.Tech. in Instrumentation / Sensor System Design, Biomedical Instrumentation, Biomedical Signal/Image processing, Process Control, Cyber-physical systems, Cyber/networked control system, Industrial Automation, and any emerging area of specialization related to Instrumentation and Control Engineering.
4.11.	Department of Management Studies	Applicants with Two-year Full-time Master's degree in Business Administration / Two-year Post Graduate Diploma in Management / Masters' Degree in Industrial Engineering / Management with a CAT / UGC-NET / XAT / MAT / GMAT/ GATE score. Candidates with the above eligibility requirements and qualified doctoral research fellowships like UGC-JRF/RGNF/other equivalent research fellowships in Management may also apply.
4.12	Department of Mechanical Engineering	Applicants with B.E./B.Tech. in Mechanical Engineering and relevant branches with Master's in any specialization relevant to Mechanical Engineering.
4.13	Department of Metallurgical and Materials Engineering	Bachelor's degree in Engineering/ Technology in the appropriate branch of study / PG degree in Science (Physics / Chemistry/ Material Science / Applied Science/Applied Physics / Applied Chemistry) followed by M.Tech. Degree/M.S (by Research) in Material Science and Engg./equivalent PG degree in related discipline.
4.13.1	Centre of Excellence in Corrosion and Surface Engineering (CECASE)	Applicants with M.E. / M.Tech. in Metallurgical Engineering, Materials Science & Engineering, Welding Engineering, Industrial Metallurgy, Mechanical Engineering, Thermal Engineering, Manufacturing, Design, Automobile Engineering, Aeronautical Engineering, Nano Science & Nano Technology, Chemical Engineering, Electrical Engineering, Electronics Engineering, Instrumentation and Control Engineering or any other equivalent degree. The Ph.D. programme at CECASE is purely part-time.
4.14	Department of Production Engineering	Bachelor's and Master's / M.S. (by Research) degree in Engineering / Technology in the relevant branch of study.
4.15	Department of Mathematics	M.A./M.Sc. in Mathematics/ Applied Mathematics, M. Math /M. Stat. Applicants having their own fellowships from funding agencies such as CSIR / UGC – JRF/ DST / DAE / NET / NBHM / INSPIRE, etc., can apply for Ph.D. in the department relevant to the research grant. Candidates having Qualified GATE Score in Science streams only will be considered for HTRA.
4.16	Department of Physics	Masters' degrees in Physics / Applied Physics / Materials Science / Applied Electronics with a qualified GATE score/ UGC / CSIR / NET / INSPIRE fellowship or other valid fellowships. M. Tech. in Non-Destructive Testing / Materials Science, with a qualified GATE score.
4.17	Department of Chemistry	Masters' degrees in Chemistry/Applied Chemistry. Applicants having their own fellowships from funding agencies such as CSIR/ UGC – JRF / DST / DAE / NET / NBHM / INSPIRE, etc., can apply for Ph.D. in the department relevant to the research grant. Qualified GATE Score in Science streams should have been obtained.

## 5. SELECTION PROCEDURE

- For all the categories (full- and part-time), the mode and norms for selection shall be uniform. Following the scrutiny and short-listing of the applications, eligible candidates will be called to attend a written test. National Level Ph.D. entrance test will be conducted at NIT, Tiruchirappalli as an alternative to the mandatory GATE score criterion for HTRA candidates in Engineering Disciplines for Academic Year 2024-25 for LATERAL APPLICANTS only.
- Candidates, short listed based on the performance in written test\* need to appear for a technical and personal interview conducted by the Departmental Research Committee comprising of HoD, all eligible research guides/supervisors and the Dean's nominee (observer).
- The tentative schedule of this process is around **Jan 7-9, 2025**, but information on shortlisted applicants and the dates of written test and interviews shall be put up on the institute's website in due course of time. No correspondence from the applicants is entertained, unless otherwise the institute officials write an email.

## 6. MISCELLANEOUS INFORMATION

Apart from the aforementioned information, the following may be useful to the applicants.

### 6.1. Duration of the Programme

The duration of the programme and the timeline for submission of the thesis are counted from the date of provisional registration. However, it must be noted that the HTRA is available for 5 years only, and for the externally funded students fellowship is available till the project is completed, which is usually 2-3 years; no financial assistance is available thereafter.

The minimum duration of the Ph.D. Programme prescribed is three years for all categories. For full-time students with HTRA / external funding the permitted duration is up to a maximum of 6 years, and for part-time students it is up to a maximum of 7 years. Under extraordinary circumstances, based on the recommendations of the doctoral committees, extension of duration may be considered. Nevertheless, at the end of 8 years from the date of provisional registration, no further extension will be given and the registration to the Ph.D. programme stands cancelled.

### 6.2 Place of research work

The candidates admitted under full-time category shall work at NIT, Tiruchirappalli till the submission of thesis. Their work is supervised by the guide (and co-guide, if any) allotted at the time of admission.

Those admitted under part-time external (External-Industry/organization with R&D facility) category from industry/organization/national laboratories, will normally carry out part or all of his/ her research work in their place of employment. For these students, there will be two Research Supervisors, one principal research supervisor from NIT, Tiruchirappalli and one External co-supervisor/coordinator from his/her place of work.

For those candidates admitted under part-time external (On-Campus) category from academic institutions, industries, and public sectors the place of work shall be NIT, Tiruchirappalli even though he/she may be carrying out a part of research work in his/her institution of employment. For these students, their work is supervised only by

the guide (and co- guide, if any) allotted at the time of admission.

Candidates admitted under part-time External (Industry/organization with R&D facility) category shall visit and physically report to the research supervisor/Doctoral Committee at least on three different occasions during every semester for official discussions, until the submission of the thesis.

## **7. COURSE WORK**

The coursework requirement will be considered to be fulfilled upon the student's successful completion of the courses at NIT, Tiruchirappalli only. However, for the convenience of Part-Time External (Industry/organization with R&D facility) students (from Government and quasi-government R&D Organizations / Public sector having R & D facilities / National Research laboratories / Reputed industries/organizations (private sector/MNCs) having well-established R&D facilities) alone the course work requirement can be considered to be fulfilled either by undertaking to study the courses at NIT, Tiruchirappalli or by taking online courses (PG Level) offered under reputed agencies such as NPTEL which are approved by the Doctoral Committee. For the online courses, after certification from the agency, an evaluation will be carried out by the research supervisor/Doctoral Committee at NIT Tiruchirappalli.

### **HOW TO APPLY?**

Applicants must apply through online portal <https://nittadm.samarth.edu.in/2024/> only.

While filling-in the online application, attention must be paid to the following:

1. Applicants are requested to apply online only. Hard copy of the application is needed through proper channel from the part-time internal applicants only.
2. Applicants must fill/enter their CGPA or percentage of marks as issued by their institute / university (do not enter equivalent CGPA or percentage of marks).
3. Online application once submitted by the applicants shall be considered final and binding. Requests for making corrections in the online application shall not be entertained once the final submission is made.
4. Additional instructions to the applicants with Integrated B. Tech.–M.Tech.
  - a. Dual Degree applicants are advised to fill up the 'Academic Qualification' option in the online application format as follows:
  - b. Graduate degree: Fill up the CGPA / % Marks up to 8th Semester (year of passing: 8<sup>th</sup> Semester Examination year).
  - c. Post Graduate degree: Fill up the CGPA / % Marks of the 7<sup>th</sup> to 10<sup>th</sup> Semester (year of passing: 10<sup>th</sup> Semester Examination year).
5. An applicant fulfilling minimum eligibility criteria (cf. page 3) can choose up to 3 departments he/she is eligible.
6. Each application must accompany an application fee is Rs. 1000/- per department for OC/GEN-EWS/OBC-NCL applicants and Rs. 500/- per department for SC/ST/PwD applicants. Applications to more than one department shall be considered only upon payment of the requisite fees for each department. Application fee is non-refundable.
7. The fee payment (one or more departments) should be made on or before the last date – 9<sup>th</sup> Dec 2024 (11:59 P.M).

**Applicants/Candidates are advised to visit the Institute's website:**

**<https://www.nitt.edu> and <https://nittadm.samarth.edu.in/2024>**

**regularly for all updates about subsequent amendments in the advertisement, shortlists, important dates for written test, interviews, and results. No correspondence in any form in this regard will be made by the Institute with an individual applicant/candidate.**

### **IMPORTANT DATES**

<b>Start of Online Application (Website Open)</b>	<b>14<sup>th</sup> November 2024 (10:00 AM)</b>
<b>Last date for submission of Online Application (Website Closure)</b>	<b>9<sup>th</sup> December 2024 (11:59 PM.)</b>
<b>Tentative Schedule for Written Test / Interview</b>	<b>7<sup>th</sup> to 9<sup>th</sup> January 2025</b>

### **For further queries, contact:**

The Chairman (Ph.D. Admission Committee),

Academic Office,

National Institute of Technology,

Tiruchirappalli – 620 015, Tamil Nadu.

Phone: +91-431-2503911 / +91 9486001158

(Contact hours: 3:00 pm to 5:00 pm during working days)

Email: [phdadmission@nitt.edu](mailto:phdadmission@nitt.edu)

**ANNEXURE**  
**AREAS OF SPECIALIZATION**

Sl. No.	Department	Specializations
1.	Architecture	General architecture, Energy Efficient/ Sustainable Architecture, Housing, Urban Heritage and Conservation, Building Conservation and Adaptive Re-use, Urban Design, Cost-effective Construction Techniques, Construction Management, Building structural systems, Landscape Architecture, Landscape Planning/ Design, Urban Landscape, Environment and Behavior Studies, Environmental Psychology, Urban Micro climate, Cultural Landscape, Environmental Planning and Urban Planning.
2.	Chemical Engineering	Process Control and Instrumentation, Nanotechnology, Environmental Engineering & Management, Photo catalysis, Polymer, Membrane Technology, Membrane Separation, Computational Fluid Dynamics, Chemical Reaction Engineering, Catalysis, Renewable Energy, Bio-Chemical Engineering, Biotechnology, Ceramic Technology, Paint Technology, Pharmaceutical Technology, Process Modeling and Simulation, Electrochemical engineering, Food Technology, Advanced materials, Fuels and energy, Transfer operations, Separation and purification, Chemical technology, Process Intensification, Process development, Biochemical processes, petroleum /petrochemical technology, Water treatment & reclamation and any emerging area of specialization related to Chemical Engineering discipline.
3.	Chemistry	Organic Chemistry, Inorganic Chemistry, Physical chemistry and Analytical Chemistry
4.	Civil Engineering	Full time with HTRA: specializations includes Transportation Engineering / Structural Engineering / Environmental Engineering / Geotechnical Engineering / Hydraulics and Water Resources Engineering / GIS and Remote Sensing / any equivalent discipline  Part time category: specializations include Transportation Engineering / Structural Engineering / Environmental Engineering / Geotechnical Engineering / Hydraulics and Water Resources Engineering / GIS and Remote Sensing / Construction Technology and Management / Ocean Engineering / any equivalent discipline.
5.	Computer Applications	Big Data Analytics, Bioinformatics, Cloud Computing, Computational Optimization, Computer Networks, Computer Vision, Cryptography, Data Base Management Systems, Data Compression, Data Mining, Distributed Systems, DNA Computing, Graph Theory and Algorithms, Image Processing, Information Extraction, Information Retrieval, Information Security, Membrane Computing, Micro-services, Multimedia Computation, Parallel Computing, Software Engineering, Serverless computing, Text Analytics, Theory of Computing, Soft Computing, Wireless Sensor Networks (WSNs), IoT, Web Mining, NLP, Web Technology, Block chain technology, Meta learning and any emerging area of specialization related to Computer Science discipline.
6.	Computer Science & Engineering	Algorithms and Graph Theory, Computer Architecture/Computer hardware, Computer Networks and Network Security, Databases and Data mining, Operating Systems, Cloud Computing, Speech and Vision, Theoretical Computer Science, VLSI design, Web Informatics and Web Technology, Wireless Networks, Cryptography, Security, Image Processing & Image Security, Machine Learning, Deep Learning, Natural language processing, Software Engineering, Social Network Analysis and Recommendation Systems, Embedded and Real-time Systems, High Performance Computing, Data Analytics, Data Science, Human Computer Interaction, Cellular Automata, Artificial Life, Mobile Security, Software-defined Network, Game Theory, IoT, Data Compression, Information Retrieval, Knowledge Graphs and Ontology, Computational Linguistics and any emerging area of specialization related to CSE discipline



7.	Energy & Environment	Algal technology, Wastewater treatment, solar hybrid systems, Carbon capture technologies, Energy system analysis, Coal and Biomass Conversion, value added products from biomass, Thermal storage, Energy storage, Energy conservation and management, Thermo-chemical conversion of biomass, DC microgrid, Loadmanagement, smart energy systems, Materials for energy storage and Renewalenergy applications. Battery thermal management, Human waste management, 3D printing applications in energy, Hydrogen generation, Storage and Utilization, Electric Vehicle Technologies, IOT in Energy Systems, Smart grid Power & Energy Economics, AI/ML in Energy Systems, FuelCells, Nanofluids and Convective HeatTransfer, Power electronics/ Power systems/ Control systems/ Smart grid / Electrical Vehicle technology.
8.	Electronics and Communication Engineering	Signal and Image Processing, Wireless communication, Wireless networks, Microwave engineering, Microwave integrated circuits, Antennas, Optical communication, Photonics, Computer Vision and Deep Learning, Artificial Intelligence, Machine Learning, VLSI Systems, VLSI Technology, Embedded Systems, Internet of Things and any emerging areas of specialization related to ECE.
9.	Electrical and Electronics Engineering	Power Systems, Power Electronics / Power Electronics & Drives / Electrical Drives & Control / Electrical Machines, Applied Electronics, VLSI Systems, Wireless Sensor networks, Knowledge Management, Machine Learning, IoT, Control and Instrumentation, Energy Engineering, High Voltage Engineering and any emerging area of specialization.
10.	Humanities and Social Sciences	<p><b>English:</b> English Language Teaching, Second Language Acquisition, Biolinguistics, Indian Writing in English, Somaesthetics, Life Writing Culture Studies, Digital Humanities, American Literature, Health Humanities, Visual Culture, Comic Studies, English Language Education, Anglo-American Modernism, Autobiography Studies, Queer Studies and Modernity in India, with a special focus on Odisha, Transgender Studies, Postcritical Literary Studies, author Studies, Literary Theory and the Philosophy of Literature, Neuroscience of Language and Cognition, SDGs and Language Education and Aviation English.</p> <p><b>Economics:</b> International Economics, Micro &amp; Macro Economics, Environmental Economics &amp; Sustainability Development, Monetary &amp; Finance, Econometrics, Data Science, AI &amp; ML Techniques, Agriculture &amp; Industrial Economics, Growth Model, Economics Policy, Entrepreneurship Development, Information Economics, and Economics of Human Resources</p>
11.	Instrumentation and Control Engg.	Instrumentation system, Flexible devices and sensors, RF and microwave sensors, Signal Processing Applications, Embedded System Design, Biomedical Instrumentation Engineering. Artificial intelligence for measurement and control applications, Robotics in automation, Cyber Physical Systems / Cyber Security, Precision Measurement, Automotive instrumentation systems IoT / IIoT framework, Industrial Automation, Soft mechatronics, Biomechatronics, Medical Electronics, Instrumentation and Signal Processing Modeling and Control of Dynamical Systems, Process Control, Process Systems Engineering, Modeling, Control and implementation of smart structures, Design and development of new sensors, actuators and control, soft-mechatronics, Energy harvesting, Flexible electronics and wearable systems. Exa-scale computing applications in control system design, Control theoretic methods in Fin-Tech (Financial Technology) and Extreme Automation
12.	Management Studies	Human Resource Management, Organisational Behaviour, Marketing, Finance, Production and Operation Management, Data Sciences, Information Systems and Technology, General Management.

13.	Mathematics	Fluid Dynamics, Probability and Queueing Theory, Numerical Analysis, Differential Equations, Image Processing, Linear Algebra, Complex Analysis, Fuzzy Mathematical Modelling.
14.	Mechanical Engineering	Alternate Fuels, Automobile Engineering, Biomechanics, Combustion, Computational Fluid Dynamics, Cryogenics, Design of Pressure Vessel and Piping, Energy storage systems, FE Simulation, Fluid Mechanics, Fluid Power Systems and Control, Heat Transfer, IC Engines, Refrigeration and Air Conditioning, Renewable Energy, Solar Energy Applications, Thermal management, Industrial Safety Engineering, Machine Design, MEMS, Nanomaterials and Composites, Stress Analysis, Peridynamics, Vibrational Analysis, Welding, Wind turbine, and 3D Printing, Cleaner Energy Systems, Life Cycle Analysis, Hybrid Electric vehicles, and any emerging area related to Mechanical Engineering.
15.	Metallurgical and Materials Engineering	Biomaterials, Ceramic Materials, Composite Materials, Computational materials science, Corrosion, Electro – chemistry, Failure Analysis, Foundry Technology, Fuel Cells, Iron making and Steel making, Joining of Materials, Material Characterization, Materials Processing, Mechanical Behaviors of Materials, Metal Casting, Metal Forming, Mineral Processing, Nano-materials, Non Destructive testing, Non-ferrous extraction, Non-metallic materials, Physical Metallurgy, Polymers, Powder Metallurgy, Process Metallurgy / Extractive Metallurgy, Process Modeling, Simulation, Structure Property Correlations, Surface Engineering, Quality Management and Economic aspects of metal production processes, Welding and any emerging area of specialization.
15.a	CECASE	Basic and Applied Aspects of Corrosion Science and Engineering, Basic and Applied Aspects of Surface Science and Engineering, Surface Catalysis, Spectroscopy and Sensors, Engineering and Industrial Tribology, Lubrication, Industrial Coatings, Thermal Spray, Laser Surface Engineering, Weldment Corrosion & its Control, Corrosion Inhibition, Castings, Development of New Materials, Coatings for High Temperature Applications, Nano Materials, Nano Composite Coatings, Solid State Joining, Process Control and Instrumentation, Electro Chemical Engineering – as applicable to Railways, Power Plants, Process Industries, Petro Chemical Plants, Naval / Marine, Mining, Paper and Pulp, Automobile and all their allied industries.
16.	Physics	Fiber Optic Sensors, Laser Spectroscopy, Materials Science, Nanomaterials, Magnetic Materials, Thin Films, Photonics, Flexible Energy Harvesters, Quantum Computation and Information, Theoretical Condensed Matter Physics, Astronomy and Astrophysics, Theoretical High Energy Physics, Micro-robotics, Electronic-nose, Artificial Neural Network, Non-Destructive Testing and any emerging area of specialization in Physics.
17.	Production Engineering	Production Engineering / Manufacturing Engineering / Industrial Engineering / Mechanical Engineering and any emerging area of specialization related to Production Engineering.

## Form - 1

### (To be submitted in the Official Letter Head by the Ph.D. External (Industry/organization with R&D facility) Registration Candidates)

The application from Mr./ Ms. \_\_\_\_\_ working  
as \_\_\_\_\_ in \_\_\_\_\_  
since \_\_\_\_\_ is herewith recommended and forwarded for admission under  
External Registration Scheme for part time Ph.D. Program in the Department  
of \_\_\_\_\_, National Institute of Technology, Tiruchirappalli

Certified that:

1. Our organization has adequate facilities for carrying out the research as indicated by the applicant and if he/she is selected, these will be made available to him/her till the completion of the programme.
2. The applicant will be deputed/given leave for duration of his/her residence period at NIT, Tiruchirappalli (if required).
3. Facilities will be made available to the Supervisor (External Research Co-Supervisor) to supervise the work of the applicant and to attend the DC meetings at NIT, Tiruchirappalli, when necessary.
4. Till the completion of his/her research programme, the applicant will not ordinarily be transferred to another unit or place which may impede his/her work under the scheme. If such a transfer is necessary, NIT, Tiruchirappalli will be informed atleast before one month of such transfer order.
5. No part of the work carried out in fulfillment of the Research programme will be utilized commercially or for applying for a Patent without the approval of National Institute of Technology, Tiruchirappalli

Date:

Signature of the Sponsoring Authority

Name and Designation

Seal of the organization/ Institution

Postal address of the Organization/ Institution:

## Form - 2

### **Certificate from the External Research Co-Supervisor/ Research coordinator (To be submitted by the Ph.D. External (Industry/organization with R&D facility) Candidates)**

This is to state that in the event of Mr./ Ms. \_\_\_\_\_ of this organization being selected for part time Ph.D. programme in the Department of \_\_\_\_\_ under the External Registration Scheme of NIT, Tiruchirappalli, I agree to be his/her External Research Co- Supervisor / Research coordinator and shall extend all possible guidance and access to the following facilities to enable him/her to carry out his/her research programme towards the submission of thesis.

\*Particulars of Prospective External Research Co-Supervisor/Research Coordinator:

1.	Name of proposed External Research Co-Supervisor / Research coordinator (In Block letters)	:	
2.	Designation	:	
3.	Academic qualifications of External Research Supervisor /Research coordinator	:	
4.	Experience (No. of Years)	:	
5.	No. of Publications with details	:	
6.	Membership in Professional Societies	:	

Research Facilities (relevant to area of research only) Available (To be listed here)

Date:	Signature of the External Research Co-Supervisor / Research Coordinator Name and Designation
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Seal of the organization

\*The external Research Co-Supervisor should have a Ph.D. degree and a minimum of 2 papers in refereed journals. The research coordinator should have a PG degree with atleast ten years of experience with regular position in the organization.

### Form - 3

**(To be submitted in the Official Letter Head by Ph.D. Part time – External (On campus) candidates)**

The applicant \_\_\_\_\_ working as \_\_\_\_\_ in \_\_\_\_\_ since is herewith recommended and forwarded for admission under Part time - External - On campus scheme for Ph.D. programme in the Department of National Institute of Technology, Tiruchirappalli.

1. We note that facilities of the NIT, Tiruchirappalli will be made available to him/ her for carrying out the research work under the supervision of a Research Supervisor and he/ she has to pay full fees every semester for the use of laboratory, library and other facilities of the Institute.
2. The research facilities available in our organization will also be accessible to him/ her in the case of selection.
3. The applicant will be deputed/given leave for duration of his/her residence period at NIT, Tiruchirappalli.
4. Till the completion of his/her research programme, the applicant will not ordinarily be transferred to another unit or place which may impede his/her work under the scheme. If such a transfer is necessary, NIT, Tiruchirappalli will be informed atleast before one month of such transfer order.
5. No part of the work carried out in fulfillment of the Research programme will be utilized commercially or for applying for a Patent without the approval of National Institute of Technology, Tiruchirappalli.

Date: Signature of the Sponsoring Authority Name and Designation

Seal of the organization / Institution

Postal address of the Organization/ Institution

## ANNEXURE-II

### DECLARATION FOR THE LATE SUBMISSION OF RELEVANT DOCUMENTS

Name of the Candidate	
Date of Birth	
Course	Ph.D./MS (by Research)
Ph.D. Admission Category	FT-HTRA/FT-Externally Funded and Project/FT-Non Stipendiary/PT-External (Industry)/PT-On Campus
MS (by Research) Admission Category	FT-Project/PT-Project/PT-Staff
Application Number	
GATE Score (if applicable)	
Qualifying Degree Passing Status	Appeared / Passed
Qualifying Degree	
Qualifying Degree Discipline	
Mobile Number	
Email id	

#### **Allotment Details**

Allotted Department	
Allotted Community Category	

The following certificates are not currently available with me due to late declaration of result/non-issuance of certificate. I undertake that I will submit the following certificate(s) on or before 28<sup>th</sup> Feb 2025, failing which I shall forgo my admission at NIT, Tiruchirappalli. Further, I am aware that I would get the HTRA/Fellowship only after the submission/verification of the following certificates:

- 1. Original Provisional / Degree certificate**
- 2. Original Transfer Certificate/Migration Certificate**
- 3. Original Grade / Mark Sheets**
- 4. Valid GATE/National level qualifying examination scorecard**
- 5. Any other\***

**Date**

**Signature of the Candidate**

**\*Note: This late submission form is not applicable for CATEGORY CERTIFICATE.  
GEN-EWS/OBC-NCL/SC/ST candidates should produce the required original category certificate**

## Frequently Asked Questions (FAQs)

### For Ph.D. Admissions at NIT, Tiruchirappalli (January 2025)

- Query:** What is the acceptable issue date for OBC-NCL/GEN-EWS certificates  
**Answer:** The OBC-NCL / GEN-EWS certificate must be issued on or after April 1, 2024.  
An affidavit can be uploaded if the certificate has not yet been received.
- Query:** Is there any format for late submission of relevant documents  
**Answer:** The late submission form is available in the brochure and can be submitted in case of non-availability of documents needed for Ph.D. admission. For any further information, refer to the Ph.D. admission brochure. Note: This late submission form is not applicable for CATEGORY CERTIFICATE. GEN-EWS/OBC-NCL/SC/ST candidates should produce the required original category certificate
- Query:** Can I submit the Transfer / Migration certificate later?  
**Answer:** TC and migration from recently passed out college/institute can be uploaded. If not available, please fill out the late submission form.
- Query:** Is GATE / NET / Any other national level test score being mandatory for admission?  
**Answer:** GATE / equivalent National level test score is not mandatory for the HTRA category of Engineering disciplines. National Level Ph.D. entrance test will be conducted at NIT, Tiruchirappalli, as an alternative to the mandatory GATE score criterion for Academic Year 2024-25.  
A qualified GATE or an equivalent National level test score obtained at some point of time in the past is mandatory for the HTRA category of Architecture, Sciences (Mathematics, Physics, Chemistry), Computer Applications, Management, and Humanities & Social Sciences disciplines.
- Query:** what are the dates for written test and interview?  
**Answer:** The dates are yet to be finalized. Refer NIT, Tiruchirappalli website for the updates
- Query:** What are to be uploaded under Supporting documents for Full-Time?  
**Answer:** Proof of Research publications (if any), research proposal (if any), and statement of Purpose (SoP) can be uploaded as a single PDF file. For further details, please refer to the Information brochure.
- Query:** How to get the ABC ID?  
**Answer:** Applicants can create ABC ID using the following link.  
<https://www.abc.gov.in/>
- Query:** Is the written test mandatory for Ph.D. admission at NIT, Tiruchirappalli  
**Answer:** A written test conducted by NIT, Tiruchirappalli is compulsory for all applicants seeking Ph.D. admission for the January 2025 session.