

National Institute of Technology, Uttarakhand

Information Brochure Ph.D. Programme Even Semester 2019



Applications are invited for admission to Ph.D. Programme in Even Semester 2019.

Application form and Information Brochure can be downloaded from NITUK website www.nituk.ac.in

Eligibility: A candidate is eligible for registration for Ph.D. if he/she satisfies the following conditions:

A Master's degree in the concerned or an allied subject with a minimum of 1st class (C.P.I or C.G.P.A. greater than 6.75 on a 10 point scale if class is not provided) and GATE / NET (CSIR/UGC/LS) in the concerned subject or discipline.

Or

A Bachelor's degree with minimum of 1st class (C.P.I or C.G.P.A. greater than 6.75 on a 10 point scale if class is not provided) with at least 55% marks at Master's level and GATE / NET (CSIR/UGC/LS) in the concerned subject or discipline.

Note: GATE / NET (CSIR/UGC/LS) in the concerned subject or discipline is mandatory. However, the exemption of GATE/NET for part-time PhD programme shall only be given to the applicants who are serving employee in Central/State Govt., PSU and Autonomous Bodies with minimum two years of continuous service.

Department/Subject wise list of Areas of Research in Ph.D. Programme is as under:

Name of Department	Specialization
CIVIL	<ol style="list-style-type: none"> 1. Geotechnical Engineering. 2. Transportation Engineering. 3. Structural Engineering.
CSE	<ol style="list-style-type: none"> 1. Mobile & Distributed Computing Deep, learning & Sensor Networks. 2. Biometrics, Pattern Recognition, Image Processing, Visual Attention Modelling, Machine Learning. 3. Wireless, Sensor Networks, Wireless Networks, Security, Machine Learning, Data Analytics, Cloud Computing, Meta heuristics. 4. Cryptography, Cryptographic Key Establishment, Secure Multicasting. 5. Cryptography, Security, Secret Sharing Schemes.
ECE	<ol style="list-style-type: none"> 1. Speech Signal Processing, Biomedical Signal & Image Processing, Optimization Algorithms, Non-invasive Biosensors for Disease Detection. 2. Optical Communication, Optical Sensors, Optoelectronics, Communication System. 3. Multidimensional System, Finite Word-length Effects, Low Power VLSI. 4. Analog Integrated Circuits and Signal Processing, Analog Signal Processing. 5. Microelectronics and VLSI Design.
EEE	<ol style="list-style-type: none"> 1. Fractional Order System, Fractional order hold, Various controllers (Fractional order controllers, Model predictive controllers, PID controllers, Kalman Filter LQR, LQG and state Observers. Induction Generator, Electric Drives, closed loop control of DC-DC converter, Multilevel DC-AC converter, Renewable Energy.

	2. Power system protection, micro grid, smart grid, renewable energy application, wams based protection schemes, renewable energy integration with grid.
MEC	1. CAD and Additive Manufacturing.
	2. Advanced Machining and Joining Processes, Welding, Simulation of Manufacturing Processes, Materials Processing Thermoplastic Composites (Extrusion).
	3. Heat Transfer Enhancement, Solar Energy Harvesting, Numerical Modeling and Simulation, Metal Additive Manufacturing.
	4. Internal Combustion Engines, Alternate Fuels and Emissions, Non-Conventional Sources of Energy, Energy Storage, Hydrogen Energy, Combustion in IC Engines, Cogeneration/Trigenertation System, Hybrid/Electric Vehicles.
	5. Advanced Manufacturing Processes.
	6. Nano composite, FEM, Vibration, Molecular Dynamics Simulation.
	7. Active Vibration Control, Structural Dynamics, Piezoelectric Energy Harvesting, smart structures.
	8. Heat Transfer, Porous medium Combustion, Energy & Environment.
	9. Advanced Fluid Mechanics, Flow boiling & Heat Transfer, Multi phase flow, CFD.
Sci. & Hum.	
Chemistry	1. Total Synthesis of Bioactive Natural Products, Development of New Methodology Reactions, Medicinal Chemistry. 2. Synthesis & Characterization of Nano Material for application in chemical sensor. 3. Inorganic Chemistry. 4. Organic Chemistry. 5. Inorganic chemistry, Metal Organic Frameworks, Supramolecular Chemistry and Photocatalysis.
Physics	1. Magnetic Thin Films and Nanowires. 2. Solid State Physics, Material Sciences and Optics. 3. Thin film Magnetism Hydrogen sensing & storage. 4. X-ray scattering and band structure calculation.
Mathematics	1. Computational Mechanics, Numerical Analysis, Fracture Mechanics, Smart Materials.
	2. Nonlinear Waves, Hyperbolic Systems of PDEs.
	3. Mathematical Biology, Molecular Dynamics.
	4. Optimization, Soft Computing.
	5. Mathematical Modelling of Physiological Flows, Biofluid Mechanics, Peristaltic Pumping, Microfluidics and Nano fluidics, Non-Newtonian Fluids.
	6. Summability and Approximation Theory.
English	1. Post colonialism, ELT & Communication Studies, Cinema Studies and Diaspora, New Literatures.
	2. Literary Theory and Criticism, Indian English Studies, Postcolonial Literature, Eco-cultural Studies, ELT & Comm. Studies.

*Restriction on number of seats is only for Full Time Research Scholars. TEQIP-III fund is available for 10 Full-Time Ph.D. Scholars. However, the no. of intake sponsored by Institute for Full-Time Scholars will be decided by the Institute

Authority. There are no restrictions of seats for Part Time Research Scholars. The distribution of fellowship (Institute and TEQIP-III) will be decided as per the merit list.

Selection Procedure:

The eligible candidates will be called for written test. The candidate who secures at least 40% marks in the written test will be shortlisted for interview. Interview shall be conducted on the same day. The list of shortlisted candidates for written test will be uploaded on Institute's website: www.nituk.ac.in. No separate letter/communication will be made to any individual for written test.

Important Points:

- Candidates MUST specify broad areas of research in the application form.
- Candidate has to attach a demand draft of Rs.500/- as application fee (Non-Refundable) with the application form. Application form without demand draft of Rs.500/- will be rejected.
- Incomplete Application Forms received after the last date will be rejected. Institute will not be responsible for any postal delays.
- Candidates having valid GATE score or NET (LS) will be awarded Institute fellowship as per Govt. of India norms for Full-time Program.
- Candidates having NET (CSIT/UGC) can apply for full-time Ph.D. Program through this advertisement.
- Part time research scholars will not be provided any fellowship from the Institute.
- List of shortlisted candidates for written test will be displayed on institute website.
- No separate letter / communication will be made to any individual for written test.
- Candidates are advised to visit Institute's website to know the Ordinances, Rules & Regulations for Ph.D. Programme.
- The candidates are advised to visit the Institute's website for Faculty Expertise and also for updated information about the Ph.D. Programme Even Semester 2019.
- Research scholar selected for the Ph.D. Programme Even Semester 2019 will have to complete the specified course work.
- Accommodation is NOT available for the Ph.D. scholars in the hostel of the Institute.
- Candidates will not be given TA/DA/ any allowances for attending written test/interview.
- Name of the qualified candidates for Ph.D. Programme will also be displayed on the Institute website.
- Institute does not guarantee availability of supervisor in the area of research desired by the candidate. Candidates are advised to discuss with faculty of the department to identify whether their research interest match with the facilities / expertise available and whether any supervisor is willing to offer project in the desired area.
- Other relevant information regarding admission to Ph.D. Programme will be informed to the selected candidates after 08/02/2019 through an official letter from the Institute.
- Candidates will be funded for full-time Ph.D. programme by Institute and TEQIP-III fund as per Govt. of India norms.
- TEQIP-III fund is available for three years from the date of joining of candidates.

Details of Ph.D. Fee Structure:

a) Application fee for Ph.D. registration: Rs.500/-

b) Other fees :

(I)	Registration	Rs. 5,000/- (one time)
	Tuition Fee	Rs. 15,000/- (annual)
	Caution money	Rs. 3,000/- (refundable)
	Library fee	Rs. 2,000/- (one time)
	Development fee	Rs. 10,000/- (annual)

TOTAL **Rs. 35,000/-**

Rs. 35,000/- is to be paid before 31st January / 31st July.

(II) Subsequent years: Annual fees

	Tuition fee	Rs. 15,000/-
	Development fee	Rs. 10,000/-

TOTAL **Rs. 25,000/-**

Rs. 25,000/- is to be paid before six monthly seminars of June / December.

Examination fee:

The examination fee of Rs. 5000/- shall be paid by the candidate prior to the submission of the thesis.

Note:

- 1. The delay in payment of semester fees may invite cancellation of registration. Payment of fees is annual. Six-monthly seminar shall not be conducted without payment of fees.*
- 2. If the thesis is submitted after 31st December /30th June, candidates are required to pay the fees for next academic session.*

How to apply for admission to Ph.D. Programme in Even Semester 2019:

The application form and other relevant information for admission to Ph.D. Programme Even Semester 2019 can be downloaded from the Institute website: www.nituk.ac.in.

Duly filled Application form along with DD of Rs.500/-, issued by any Nationalized bank, **in favor of The Director, NIT Uttarakhand, payable at Srinagar (Garhwal), Uttarakhand**, and all the documents mentioned below should reach to Assistant Registrar (Academic), NIT Uttarakhand on or before **17.01.2019 by 05:00 PM**.

The following documents (whichever applicable) arranged in the order given below should be enclosed along with the duly filled application:

- (i) Photocopy of High School (10th class) certificate.
- (ii) Photocopy of Under-Graduate degree certificate and mark sheet.
- (iii) Photocopy of Post-Graduate degree certificate and mark sheet.
- (iv) Photocopy of GATE score card or NET (CSIR/UGC/LS) qualifying certificate.
- (v) Photocopy of caste certificate.
 - (a) In case of SC/ST candidates, Caste Certificate (In Central Govt. Format) should be issued by the competent authority (not below the rank of SDO/SDM/Tahsildar).
 - (b) In case of OBC candidate, Caste Certificate (In Central Govt. Format) should be issued by the competent authority (not below the rank of SDO/SDM/Tahsildar) indicating the status regarding Non Creamy Layer (NCL). **The certificate should be issued after 31st March, 2018.**
- (vi) Photocopy of the Migration Certificate.
- (vii) If employed, No Objection Certificate (NOC) and other documents from the employer in support of your application.
- (viii) Photocopy of all the publications (if any).
- (ix) Photocopy of teaching/research experience certificate (if any).
- (x) Profile of the Organization/ Employer in case of SRS category candidate.
- (xi) Photocopy of credentials including AICTE recognized short-term courses attended, research publications, professional qualifications etc.

Note: (1) All the photocopies of documents attached with the application form should be self-attested by the candidate. Application without self-attested photocopies shall be summarily rejected.

(2) Incomplete / incorrect applications will not be considered for admission.

- (3) If seeking admission to Ph.D. Programme as Part Time candidate, candidate has to show a proof at the time of interview that he/she will be granted leave for a minimum period of six months for course work.
- (4) The eligibility shall be determined on the basis of the documents received by the last day of receiving the applications.

Important Dates:

Last date for receipt of application form.	17/01/2019
Date of displaying the list of eligible candidates for written test on Institute website.	24/01/2019
Date, time and place of reporting for written Test.	31/01/2019 Time : 9:30 AM Place : NIT, Uttarakhand Govt. I.T.I Campus Srinagar (Garhwal)
Date and time of interview at NIT, Uttarakhand.	31/01/2019
Date of announcement of result on Institute website.	08/02/2019

Visit institute website: www.nituk.ac.in regularly for more details and updates.

How to reach NIT, Uttarakhand: Please visit institute website www.nituk.ac.in and click on **How to Reach** Quick link.

Disclaimer:

The statement made in the Information Brochure and all other information contained herein is believed to be correct at the time of publication. However, the Institute reserves the right to make any changes in and additions to the regulations, conditions governing the admission, requirements, seats, fees and any other information, or statements contained in this information brochure, at any time without notice. No responsibility will be accepted by the Institute for hardship or expenses encountered by its students / any other person for such changes, additions, omissions or errors, no matter how they are caused.

ADDRESS FOR CORRESPONDENCE:

**Assistant Registrar (Academic),
National Institute of Technology, Uttarakhand,
Govt. I.T.I., Srinagar (Garhwal),
District- Pauri Garhwal,
Uttarakhand - 246174.
Telephone: 01346-257404, E-mail: academic.nituk@gov.in**

**Registrar
NIT, Uttarakhand**