

NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR
SILCHAR - 788 010, ASSAM, INDIA
ADMISSION INTO Ph.D. Programme

Applications are invited for admission into **Ph.D programme** in the following departments for
July - December, 2017 session

DEPARTMENT	SPECIALISATION	
Civil Engineering H.O.D.'s Email: upendra_kumar72@rediffmail.co	'All the branches of Civil Engineering'	
Mechanical Engineering H.O.D.'s Email: kmpandey2001@yahoo.com	<ul style="list-style-type: none"> ➤ Thermal Engineering, CFD application, Non-conventional energy ➤ Computational combustion ➤ Bio-fuel research, Boiling heat transfer, Refrigeration, Air-conditioning, CFD, Solar Energy ➤ Renewable energy, Robotics ➤ Advanced Manufacturing processes, Micro-machining ➤ Micro hydro turbine, Hybrid renewable energy system, Solar thermal collectors; ➤ Composite, Fatigue & fracture behaviour of material ➤ Extended surface, Heat transfer, Thermodynamics, Nano fluidics ➤ Design of object under water, Non-linear & linear water flow, Development of innovative idea 	<ul style="list-style-type: none"> ➤ Heat exchanges, Mixed convection, Solar thermal ➤ Uncertainty quantification, Computational mechanics and modelling, Mechanics of tribology, Meta-materials, functionally graded materials and composites, Multi-scale Analysis, Optimization and reliability analysis ➤ Non-traditional optimization, Virtual manufacturing; ➤ Fluid mechanics, LBM. ➤ Microfluidics, Natural convection, Non-Newtonian fluid mechanics, Numerical heat transfer, Bio-mechanics, Bio-materials, Fatigue behaviour of materials ➤
Electrical Engineering H.O.D.'s Email: saurabh1971@gmail.com	<ul style="list-style-type: none"> ➤ Low power VLSI, Image Processing, CNT & Nanowires Compound Semiconductors ➤ Power System Analysis and Optimization, Renewable Energy Sources ➤ Nonconventional Energy, Application of soft computing techniques in control and Operation of non-conventional energy based hybrid power system ➤ Smart grid, Power Quality, Power system Reliability, Renewable energy sources Cogeneration Management, Application of Big Data in Power system ➤ Micro-grid, Renewable energy integration in competitive power markets, FACTS device Transmission system planning 	<ul style="list-style-type: none"> ➤ Renewable energy generation of control (Power electronics control) FACTS Devices & its Control, Microgrid control, Power electronics, Electric device control ➤ Smart grid, Reliability of power system, cost allocation, Deregulated power System, use of artificial intelligence in power system, Economics of power System ➤ Control Theory, Application of control in biomedical application Time-delay system and control, Robust Control ➤ Control System, Nonlinear Control, adoptive control, Fractional order control

<p>Electronics & Communication Engg</p> <p>H.O.D.'s Email: klbaishnab@gmail.com</p>	<ul style="list-style-type: none"> ➤ Microelectronics and VLSI (Analog/Digital) Circuit Design ➤ Semiconductor Device, Modelling and Simulations ➤ MEMS ➤ Optoelectronic Materials & Photonics ➤ Renewable Energy ➤ Wireless Communication Engineering 	<ul style="list-style-type: none"> ➤ Ad-hoc Sensor Network ➤ Cognitive Radio and Millimeter Wave ➤ R.F. & Microwave Engineering ➤ Antenna Design and Optimization ➤ Signal Processing ➤ Optimization Techniques in Electronics and Communication Engineering
<p>Computer Science and Engineering</p> <p>H.O.D.'s Email: nidul.sinha@gmail.com</p>	<ul style="list-style-type: none"> ➤ Machine Intelligence ➤ Artificial Intelligence ➤ Natural Language Processing ➤ Bran Waves Research ➤ Artificial Immune Systems ➤ Semantic Networks ➤ Information Retrieval ➤ Digital Geometry ➤ Computational Geometry ➤ Computer Network Communication and Related Areas 	<ul style="list-style-type: none"> ➤ Mathematical Imaging And Image Analysis ➤ Image Hashing ➤ Shot Boundary Detection ➤ Video Indexing ➤ VLSI Physical Design Automation ➤ FPGA Layout ➤ Internet of Things ➤ Sensor Technology ➤ Speech Processing ➤ Cloud Computing
<p>Electronics & Instrumentation Engg</p> <p>H.O.D.'s Email: rdg.nits@gmail.com</p>	<ul style="list-style-type: none"> ➤ Biomedical Signal Processing ➤ Biomedical Instrumentation, BCI ➤ Biosensors ➤ Transdermal drug delivery ➤ Sensors design & Application ➤ VLSI design (Analog & Digital) ➤ Thin Film solar cells ➤ Signal, Speech & Image Processing ➤ Image Segmentation ➤ Measurement and monitoring of Industrial parameters ➤ Modelling, Estimation, Control and Optimization of energy systems (PG, Batteries, Supercapacitors in Electrified Vehicles, Wireless Sensor Nodes, Consumer Electronics) 	<ul style="list-style-type: none"> ➤ Industrial Instrumentation ➤ Intelligent Instrumentation ➤ Linear and Non-linear Control ➤ Sliding Mode Control ➤ Control of Biological systems ➤ Study of dielectric material used for insulator, Communication circuit, nano-film, defense, pharmaceutical, polymer, food and agricultural industry ➤ Communication System: Performance Analysis, Energy Efficiency and Power Allocation ➤ Wireless Communication: D2D, Cognitive Radio, 5G, UWB ➤ Wireless Networks: VANET, Cross Layer Optimization
<p>Humanities and Social Sciences</p> <p>H.O.D.'s Email: gurudas_das@yahoo.co.in</p>	<ul style="list-style-type: none"> ➤ English Literature ➤ Feminist Theories and Literature ➤ Films Studies ➤ Regional Development 	<ul style="list-style-type: none"> ➤ Comparative Literature ➤ Cultural Studies ➤ Financial Economics ➤ Development Economics
<p>Mathematics</p> <p>H.O.D.'s Email: santanuroy79@yahoo.in</p>	<ul style="list-style-type: none"> ➤ Non-linear integral equation ➤ Networking optimization ➤ Differential Equations ➤ Mathematical Modeling of Epidemics, Delay Mathematical Modeling 	<ul style="list-style-type: none"> ➤ Fuzzy topology, Rough set theory, Soft set theory ➤ Computation Fluid Dynamics: Micro-nano fluidics Modelling ➤ Spectral Methods for Partial Differential Equations

<p>Chemistry</p> <p>H.O.D.'s Email: pranjitbarman@yahoo.co.in</p>	<ul style="list-style-type: none"> ➤ Synthesis of bivalent organosulfur compounds and their applications. Synthesis of metal complexes and their applications ➤ Nano materials, green methodologies for production of noble bimetallic and metal oxide nano materials in various organic transformations and water treatment adsorption/interfacial phenomenon, development of low cost and synthetic nano adsorbents for water treatment, waster plastic recycling, co-processing of vacuum residues with plastics and biomass, desulfurization, solid water management ➤ Nano material synthesis, conducting polymers, photocatalysis, solar cells 	<ul style="list-style-type: none"> ➤ Synthetic organic chemistry, green synthesis of nano particles and its applications in organic synthesis ➤ Synthesis, characterization of nano structured metal oxide catalysts and their application in organic reactions ➤ Multicomponent utilization as catalysts, ceramics and glass, geopolymers, mesoporous materials and adsorbent from solid waste of thermal power plants, papermills, cement industries. Investigation on Assam coal & coal combustion by products. Green & efficient synthesis of catalyst for organic transformations.
<p>Physics</p> <p>H.O.D.'s Email: rupakdutta@gmail.com</p>	<ul style="list-style-type: none"> ➤ Theoretical high energy physics ➤ Mathematical physics ➤ Density functional theory ➤ Semiconductor heterostructures and devices ➤ Solar Energy Materials, Solar Photocatalysis and Solar Photovoltaics 	<ul style="list-style-type: none"> ➤ Multiferroics ➤ Nanomaterials ➤ Energy storage materials ➤ Nanoionic resistive switching devices
<p>Management Studies</p> <p>H.O.D.s Email: ashimkd_nits@rediffmail.com</p>	<ul style="list-style-type: none"> ➤ Finance ➤ Marketing 	<ul style="list-style-type: none"> ➤ General Management

Minimum Qualifications:

For Ph.D. :

1. Students for admission into Ph.D. Programs in Engineering Departments must satisfy one of the following criteria:
 - (ii) M.E./M.Tech. or equivalent in an appropriate area with a minimum CPI of 6.5 (on a 10 point scale) or equivalent (60% of marks). For SC/ST candidates, a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks).
 - (iii) B.E./B.Tech. with an excellent academic record and with a CPI of at least 8.0 (on 10 point scale) or equivalent (75% of marks). For graduates from IITs/NITs, the minimum CPI requirement is 7.0 (on 10 point scale). For SC/ST candidates, there is a relaxation of 0.5 CPI or 5% of marks.
2. Students for admission into the Ph.D. Programs in Science and Management Studies departments must have a Master degree in the relevant discipline with a minimum CPI of 6.5 (on a 10 point scale) or equivalent (60% of marks). For SC/ST candidates, a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks).
3. Students for admission into the Ph.D. Programs in Humanities and Social Sciences (HSS) Department must have a Masters degree in any field a minimum CPI of 6.0 (on a 10 point scale) or equivalent (55% of marks). For SC/ST candidates, a minimum CPI of 5.5 (on a 10 point scale) or equivalent (50% of marks).

Assistantship: As per MHRD guidelines.

Downloadable application form with other relevant papers is available in the Institute's website: www.nits.ac.in

The filled in Application Form must be accompanied with an Application Fee of Rs. 500/- (for General/OBC) OR Rs. 250/- (for SC/ST) in the form of crossed Demand Draft in favour of **Director, N.I.T. Silchar**, payable at Silchar; otherwise, the application form will be treated as cancelled.

Application form complete in all respects should reach the respective Head of the Dept, N.I.T. Silchar, within 28th April, 2017 superscribing 'Application for admission into Ph.D. programme under _____ Dept', on the envelope.

Application must not be sent to Dean (R & C).

The candidates are advised to give their latest contact nos./e-mail ids in the application form.

Names of the short-listed candidates for attending interview shall be available in the Institute's website in due course. If necessary, the respective HOD may call the candidate through emails.

The result will be available in the website.

Important Dates:

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|-------|--|---|---|
| (i) | Last date of submission of completed form to the respective department | : | 28 th April, 2017 upto 5.00 p.m. |
| (ii) | List of short-listed candidates to be uploaded in the institute website
(To be communicated by the deptt concerned to the students through Institute's Website) | : | 8 th May, 2017 |
| (iii) | Date of written test and viva voce | : | 29 th & 30 th May, 2017 |
| (iv) | Last date of sending recommended list by the Dept to Dean (R & C) | : | 2 nd June, 2017 |
| (v) | Result to be uploaded in the Institute Website: | : | 9 th June, 2017 |
| (vi) | Period of Registration | : | 6 th & 7 th July, 2017 |

- Candidates may send their applications by speed post or e-mail.
- Application received after 28th April, 2017 will not be considered.
- Candidates who apply through email must send the hardcopy also.
- Hostel accommodation is subject to availability.

The details of specialisations, regulations, and applications form (downloadable) is available in the Institute website www.nits.ac.in.

Dean (R & C)