Advertisement for Ph.D. admission in Odd Semester of Academic Year 2023-24:

Indian and Foreign nationals are invited to apply online via Google Form (link is available on the Institute Website) for admission to Ph.D. programme in various Departments/Schools of Engineering, Sciences, Social Sciences, Computer Applications, and Business Administration for Academic Year 2023-24. The following information pertains to the seats that are available:

Deptt. / Schools	Specialization	Institute Scholarship Seats	
Civil Engg.	Structural Engineering, Water Resource Engineering, Environmental Engineering, Soil Mechanics and Foundation Engineering, Remote Sensing, Transportation Engineering, Structural/Seismic, Concrete/Structural, Water Resource & Soil Mech. & Foundation Engineering, Concrete(Exp. & Analytical), Steel, Geotechnical Engineering	(Gen -04, EWS-01, OBC(NCL)-02, OBC(PwD)-01 SC-02, ST-1)	11
Computer Engg.	Computer Networks, Internet of Things, Software Defined Networking, Wireless Sensor Networks, Mobile Computing, Cloud Computing, Pervasive Computing, Nature Inspired Computing, Soft Computing, Block Chain Technology, Information Security, Cyber Security, Web Security, Cloud Security, IoT Security, Ad-hoc Network Security, WSN Security, Security in, Key Management in WSN, Online Social Networks, Image Processing, Signal Processing, Information Retrieval, Data Mining, Data Analytics, Pattern Recognition, , Biometrics, Machine Learning, Affective Computing, Bio-informatics, Multimedia Analysis, Software Engineering, Computer Vision, Data Science	(Gen-03, EWS-01, OBC(NCL)-02, SC- 01, ST-01)	08
Information Technology	Computer Networks, Internet of Things, Software Defined Networking, Wireless Sensor Networks, Mobile Computing, Cloud Computing, Pervasive Computing, Nature Inspired Computing, Soft Computing, Block Chain Technology, Information Security, Cyber Security, Web Security, Cloud Security, IoT Security, Ad-hoc Network Security, WSN Security, Security in, Key Management in WSN, Online Social Networks, Image Processing, Signal Processing, Information Retrieval, Data Mining, Data Analytics, Pattern Recognition, Biometrics, Machine Learning, Affective Computing, Bio-informatics, Multimedia Analysis, Software Engineering, Computer Vision, Data Science	(Gen-01, EWS-01, OBC(NCL)-01, SC-01)	04
Electrical Engg.	Control System, Biomedical Signals, Instrumentation, Reliability Engg., Power System, Microgrid, Power Electronics, Power System, Renewable Energy, Renewable Energy Integration, Distributed Generation, Robotics, Computational Intelligence, Power System Control of Power Quality, Intelligent Control, Hybrid Renewable Energy Systems, Evolutionary Optimization Algorithms & Applications, Power Quality, Renewable Energy, Signal Processing, Renewable Energy, Power System Economics & Optimization, AI & ML Applications to Power Systems, Power Systems of Renewable Systems, FACTs Devices, Transient Stability & Renewable Energy, Energy Storage, Nonlinear Systems, Control of Renewable Energy Systems, Electric Vehicles, Robotics, Embedded Systems, Microgrid Energy Management, Residential Energy Management, Renewable Energy Integration, Power Electronics, Electrical Energy Systems, Electric Vehicles, Energy Management, Energy System Operation, Distribution System, Renewable Energy & Electrical Machine & Devices, Power Electronics based Renewable System & Drives, Distribution System, Planning & Operation, Automatic Generation Control, Electronic Load Dispatch, Renewable Energy Integration, Model Order Reduction, Optimal & Sub-Optimal Control Systems, Tuning and Design of Conventional and Intelligent Controllers, Machines & Drives,Intelligent Modelling of Control, Artificial Neural Networks, Nature-Inspired Algorithms, Optimization, Power System Dynamics, Control, Renewable Energy, Model-Order Reduction, MTDC Control & Dynamics, Custom Power	(Gen-05, EWS-01, OBC(NCL)-03, SC-01, SC(PwD)-01 ST-01)	12

Department	Research Areas	Vacancies (Category)	Total
Electronics & Communication Engg.	Mobile Communication and Wireless Networks, Low Power Arithmetic Circuit(s) Design, Digital Signal Processing Communication Systems, Image Processing, Communication Systems and Signal Processing, Signal and Image Processing, Wireless Communications 5G/6G Technologies, Wireless Sensor Networks/Internet of Things/Wireless Communication/Cryptography, Communication Systems Signal Processing Antenna Design, Wireless Network IOT/CRN Optimization Tech., Wireless Network Security Wireless Communication, Wireless Communications, Machine Learning and Deep Learning and Applications, NOMA, 5G/6G, RSMA Wireless Sensor Networks Semiconductor Devices Low Power VLSI Design, Digital and Image Signal Processing etc., Machine Learning & AI Future Generation Communication Systems Wireless & Optical Communication, VLSI Design, Embedded Computing Quantum Architecture, QCA Design, Low Power Digital Design, Reconfigurable Computing, Wireless Communication Cognitive Radio Networks NOMA Digital Communication, Microelectronics and VLSI, Microelectronics and VLSI Molecular Engg. of 2D Materials Energy Storage (I on Batteries and Hydrogen Storage and Spintronic Based Devices), Cryptography and Communication Systems, Fiber Optics, Optical Communication System, Optical Communication Networks, Optical Signal Processing, Microwave Photonics, Fiber Sensors, Multimode Photonics, Fiber Lasers, Signal Processing, Digital Signal and Image Processing, Computer Vision, Machine Learning, Signal Processing and Machine Learning, Image Processing, Speech Processing, IoT	(Gen-04, Gen(PwD)-01 EWS-01, OBC(NCL)-03, OBC(PwD)-01, SC- 1)	11
Mechanical Engg.	Industrial and Production Engineering, Industrial Engineering, SCM, TQM etc., Industrial & Manufacturing Engineering, Tribology, CAE, Fluid Engineering, Design and Operation of Manufacturing System, Noise Mapping and Control, EHD Lubrication Analysis, Active magnetic Bearing Design, Rotordynamics, Vibrations, High Velocity Impact Analysis, Industrial Engineering, Composites, Facility Layouts, SCM, FSQ, Quality Management, Computational Fluid Dynamics, LES, DNS, Turbulence, Transitional and Separated Flows, Nuclear Heat Transfer, Refrigeration, Air Conditioning, Heat Exchangers, Solar Energy, CFD, Thermal Engineering, Bio Energy, CAD, CAM, Testing and Evaluation of Mechanical Properties of Composites like FRPs, MMCs, Supplies and Management, Inventory Management, Technology Driven Supply Chain (RFID, Block Chain), Industry 4.0, CFD and Heat Transfer, Turbulence Modelling, Numerical Simulation of Solidification and Melting, Applications of CFD in Renewable Energy Systems, Solid Mechanics, FEM, Compliant Mechanisms, Advance Material, Welding, Thermal Spray Coatings, Casting, Cup Powder Metallurgy, Machining, Fabrication and Characterization of Composite Materials, Cladding Incremental Sheet Forming, Vibration Analysis, Whole Body Vibration, Hand Arm Vibration, Ergonomics, Condition Monitoring, Dynamics of Machines and Vehicles, FEM Analysis, Application of Vibration in Manufacturing Technologies, Machine and Materials, Composites, Lean Six Sigma, Green Engineering, Quality 4.0, Operational Excellence, Continuous Improvement, Life Cycle Assessment, Decarbonization in Manufacturing Systems, Machine Design, Mechanical Vibration,	(Gen-04, Gen(PwD)-01 EWS-01, OBC(NCL)-03, OBC(PwD)-01, SC- 1)	11
Production & Industrial Engg.	Materials, Model Machining Method, Additive Manufacturing/3D, Printing, Welding/Friction Stir Welding, Mechanical Testing and Microstructural Characterization of Advanced Materials, Wear, Numerical Modelling of Advanced Manufacturing Processes, Sustainable Grinding/Machining of Difficult to Machine Materials, Synthesis and Characterization of Metal Matrix Composite using Waste Metallic Chips and Coal Fly Ash, Additive Manufacturing, Welding Science and Technology for Demanding Materials, Nuclear Manufacturing, Structural Integrity, Residual Stresses, Materials and Characterization, Quality Reliability and Maintenance Engineering, Linear and Non-Linear Fuzzy, Intelligent Modelling for Industrial/Energy System, Advance Manufacturing Method, Development of Hybrid and Micro Machining Process, Mathematical Modelling and Evolutionary Optimization.	(Gen-01, OBC(NCL)-01, SC- 01, ST-01)	04

Department	Research Areas	Category	Seats
Physics	High Energy Physics, Energy Materials, Spectroscopy and Advanced Optical Sensing Materials, Radiation Physics Nanomaterials for Antimicrobil Sensing App., Energy Storage Devices, Supercapacitor & Batteries, Nanoscience & Nanomaterials, Laser Spectroscopes, Nano Composites and Nan Sensors, Semiconductor Physics (Experimental), Hadron Physics, Quantum Chromodynamics, Semiconductor Devices, Quantum Technologies, Ferroelectronic Field Effect Devices, Nonlinear Fiberoptics Quantum Technology, Integrated Phonics	(Gen-01, EWS-01, OBC(NCL)-01)	03
Chemistry	Coordination Chemistry, Supramolecular Compounds and Molecular Modelling, Synthetic and Organic Chemistry, Computational Organic Materials and Functional Organic Materials, Organic Chemistry and Bioorganic Medicinal Chemistry, Analytical Chemistry, Supramolecular Chemistry and Inorganic Chemistry, Organic Chemistry and Computational Chemistry, Inorganic and Organic Chemistry, Inorganic Chemistry, Material Chemistry and Physical Chemistry	(Gen-01, OBC(NCL)-01, SC-01)	03
Math	Fluid Dynamics, Numerical Analysis, Lie Theory and special Function, Robotics, Approximation Theory	(Gen-02, OBC(NCL)-01)	03
Hum. & S.S.	Economics, Management, Psychology	Gen-01	01
SREE	Power Systems, Energy Management, Energy System Operation, Distribution System, Renewable Energy, Power Electronics Based Renewable System & Drives, Power Systems & Renewable Systems, Intelligent Control, Microgrids, Hybrid Renewable Energy Systems, Evolutionary Optimization Algorithms & Applications, Renewable Energy Integration, Distributed Generation, Thermal Engineering, Bio-Energy, Solar Energy, CFD and Heat Transfer, Turbulence Modeling, Numerical Simulation of Solidification and Melting, Applications of CFD in Renewable Energy Systems	OBC(NCL)-01	01
SVE	Embedded System Design for Sleeping disorder Detection, VLSI Design, Nano Scale Devices, Hardware Software Co-Design, Embedded Computing Quantum Architecture, QCA Design, Low Power Digital Design, Reconfigurable Computing, Micro Electronics & VLSI, Circuit Designing, Device Modelling, Microelectronics and VLSI, Molecular Engineering of 2D Materials, Energy Storage and Spintronic	(Gen-01, SC-01)	02
MCA	Artificial Intelligence, Natural Language Processing, Knowledge Engineering, Machine Learning and Applications, IoT, Edge AI, Quantum Computing, Computer Vision, Artificial Intelligence, Image Processing, Pattern Recognition, Software Quality, Machine/Deep Learning Applications for Sustainable Development Block Chain, Graph, Game Theory	(Gen-01, OBC(NCL)-01, SC-01)	03
MBA	Marketing Management, Financial Management, Human Resource Management and Organizational Behavior	(Gen-01, EWS-01, OBC(NCL)-01)	03
Total		Gen-30, Gen(PwD)-02, EWS -08, OBC(NCL)-21, OBC(PwD)-01, SC- 11, SC(PwD)-01, ST-06	80

Project seats

Deptt. / Schools	No. of Slots	Title of Project	Specialization	Funding Agency	Duration
Computer Engineering	1	Key Management for Secure Multicast Applications in Space Terrestrial Integrated Networks	Information Security	ISRO	Till August 2025
Chemistry	1	Smartphone Assisted Portable Chemical Sensor for the Detection of Toxic Metals and Pesticides in Water Bodies of Haryana	Chemical Sensor, Supramolecular Chemistry, Organic Chemistry and Analytical Methods	DST-Haryana	Till November 2025
	1	Supramolecular Organic-Inorganic Hybrid Gels for the Light-Activated Therapeutic Carbon Monoxide Delivery	Supramolecular Chemistry, Inorganic Chemistry, Drug Delivery and Nanomaterials	SERB-DST	Till January 2026
	1	Ruthenium Catalysed Dehydrogenation Reaction As a Platform from Hydrogen Storage Materials	Organometallic Chemistry & Catalysis	SERB-DST	Till February 2026
	1	Boosting of Energy Generation and Storage Properties by the Composite Materials of Multinery Metal Oxides and Carbon Allotropes Synthesized from Agriculture Bio-wastes	Solid State Chemistry	SERB-DST	Till January 2026
Electronics & Communication Engineering	1	Development Enabled Algorithm for AMR	Wireless Communication	ISRO	Till April 2025

In addition to these seats, applications are also invited for Part-Time Ph.D. seats, Full-Time Ph.D. seats on CSIR-UGC-JRF etc. fellowship scheme or Full-Time Ph.D. seats in project fellowship (on minimum one-year fellowship). Such seats are variable in number depending on the availability of the supervisors' slots of the concerned Department/School for the Academic Year 2023-24.

Note: -

1. The number of Part-Time Ph.D. seats, Full-Time Ph.D. seats on CSIR-UGC-JRF etc. fellowship scheme or Full-Time Ph.D. seats in project fellowship (on minimum two-year fellowship) will be decided by the respective Departments/Schools, as per availability of supervisors/slots.

2. Candidates working under a sponsored project at NIT Kurukshetra may be considered for Ph.D. admission by the concerned Department/School only if slots are available with the PI/Co-PI and PI/Co-PI is eligible to be the supervisor/co-supervisor. In addition to above, the project duration must be minimum two years from the date of admission in Ph.D. program.

3. The conversion of Project Fellowship to Institute Fellowship on completion of project will be in accordance with Clause R-17.4 of PhD regulations of AY 2023-24.

4. Only GATE-NET qualified candidates can apply against full time Institute Scholarship seats.

5. OBC(NCL)/EWS certificate must have been issued/renewed on or after April 01, 2023.

6. Those candidates who are in the final year of their PG qualifying degrees need to fulfil the minimum educational eligibility requirements as per PhD regulation 2023-24 and submit the proof thereof by 31.10.2023 however, all other documents like Caste/Category Certificate, Course Completion Certificate will be required to be Produced in original on the date of DRC/SRC interview.

7. The last date for completion of minimum educational eligibility criteria and all other documents/certificates will be the date of DRC/SRC interview.