

Details of desired Specializations required in various departments

S.No.	Name of the Department	Desired Specialization
1	Department of Architecture	Architecture -Urban design, Sustainable architecture, Planning -Housing, Transport Planning, Urban Planning, City Planning, Town Planning, Environmental Planning, Regional Planning, Others -Construction management, Building Engineering Management, Landscape Architecture, Architectural Conservation, Building Science and Technology, Any other related field, Fine Arts, Structural Engineering
2	Department of Applied Geology	-----
3	Department of Biotechnology Engg.	-----
4	Department of Biomedical Engg.	Tissue Engineering, Bioelectronics, Biomedical Instrumentation, Biomechanics, Rehabilitation Engg., Bio Fluid Dynamics, Medical Informatics, Bio Sensors, Clinical Engg., Medical Imaging, Biomedical Device Design, Biomedical Signal Processing, Biomaterials, Bio Mems, Telemedicine, Medical Image Processing
5	Department of Chemical Engg.	-----
6	Department of Civil Engg.	-----
7	Department of Chemistry	-----
8	Department of Computer Science & Engg.	Data Mining, Network & Cyber Security, Wireless Sensor Networks, Mobile & Pervasive Computing, Parallel & Distributed Computing, IoT & Cloud Computing, Computer Vision and Image Processing, Natural Language Processing, Theoretical Computer Science, Artificial Intelligence (Machine Learning, Deep Learning, Soft Computing etc.), Big Data Processing.
9	Department of Electrical Engg.	Control system, Power Electronics, Power System, Electric Machine and Drives, Signal Processing, Measurement and Instrumentation, Electronics, Renewable Energy and allied areas of Electrical Engg.

S.No.	Name of the Department	Preferred Specialization
10	Department of Electronics & Telecommunication	VLSI Architecture design, DSP hardware design, Image processing, Microwave & RF Design and Engg. Artificial Intelligence & Machine learning, Data communication and networking
11	Department of Humanities & Social Science	Yoga
12	Department of Information Technology	Object Oriented Software Engg., Next Generation Networks, Information Security, Natural Computing, Data Modelling, BigData Analysis, Image Processing, Deep Learning, theoretical computer science.
13	Department of Mechanical Engg.	Machine Design, Thermal Engg., Production Engg., Industrial Engg., CAD-CAM, FEA, CFD
14	Department of Metallurgical Engg.	Metallurgical Thermodynamics and Kinetics, Iron Making, Steel Making, Non-Ferrous Extraction, Fracture mechanics and failure analysis, Deformation behaviour of materials, Materials simulation and modelling, Functional materials, Bio-materials, Polymer Engineering, Powder Metallurgy
15	Department of Computer Application(MCA)	-----
16	Department of Mathematics	Probability and Statistics, Operation Research, Numerical Analysis and Scientific Computing, Fluid and solid Mechanics, Mathematical Modelling, Partial Differential Equation, Algebra, Linear Algebra, Complex Analysis, Wavelet Analysis, Cryptography.
17	Department of Mining Engg.	Mine Surveying, Mine Planning and Optimization, Coal Mining and Strata Control, Rock Mechanics, Surface Mining, Mineral processing
18	Department of Physics	-----

For Serial No. 2,3,5,6,7,15 and 18 only internal faculty members may apply as per Schedule 'E' of NIT statues (Amended 2017) (Ref. Gazette of India No. 651, dated July, 24, 2017).

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