NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI – 620 015 TAMIL NADU, INDIA

FACULTY RECRUITMENT
(Ref: Advt. No. NITT/R/F/L10/2026/01 dated 04.03.2026)

Desirable areas of specialization

Sl. No.	Department	Area of specialization
1.	**Architecture (AR)**	B.Arch. and M.Arch. / M.Plan / M.Des. in any one of the following Specializations: General Architecture, Landscape Architecture, Planning, Town Planning, Urban Planning, Urban and Rural Planning, City Planning, Transport & Infrastructure Planning, Environmental planning, Energy efficient and sustainable architecture, Digital Architecture, Building Engineering and Management, Building Technology, Urban Design, Conservation, Housing
2.	**Chemical Engineering (CH)**	B.E. / B.Tech. or equivalent in Chemical Engineering and M.E. / M.Tech. in Chemical Engineering and related specializations. Ph.D. specializations: Carbon capture, utilization & storage (CCUS), Machine Learning / AI in chemical processes, Sustainable and Green Technologies, Life cycle assessment, Biomedical devices and biosystems, Next-Gen Energy Storage (batteries, supercapacitors), Synthetic Biology & Biomanufacturing, Semiconductor Manufacturing, Quantum materials and Computation, Catalysis Science and Technology, Additive Manufacturing of Chemical Systems, Advanced Porous & Functional Materials, Multiscale & Multiphysics Modelling of Complex Systems
3.	**Chemistry (CY)**	B.Sc. & BS : Chemistry M.Sc. : Chemistry, Organic Chemistry, Applied Chemistry, Analytical Chemistry, Physical Chemistry Integrated MS/M Sc in Chemistry Directed Ph D/ Ph.D & Post-Doctoral Specialization: Chemical Biology, Electron Spectroscopy, Heterogeneous Catalysis, Magnetic Resonance Spectroscopy, Molecular Spintronics, Phytochemistry, Organic Electronics/OLED, Polymer Chemistry, Supramolecular Chemistry, Solid State Chemistry [#]Desirable: B.Ed / M.Ed
4.	**Civil Engineering (CV)**	B.E/ B.Tech. in Civil Engineering/Geomatics Engineering with M.E. or M.Tech. in the following specialization: Construction Technology and Management/ Construction Engineering and

| | | Management/Infrastructure Engineering and Management/Building Technology and Construction Management/Construction Management/ Infrastructure Engineering/ Environmental Engineering/ Geomatics Engineering/ Remote Sensing and GIS/ Structural Engineering / Geotechnical Engineering/ Transportation Engineering / Disaster Management/ Water Resources Engineering with

Ph D in the following Specializations:
Building Information Modeling, Construction Contracts Management, Construction Automation and Digitalisation (use of AI/ML, IoTs, Digital Twin), Construction and Demolition Waste Management, Sustainability in Construction, Infrastructure Project and Asset Management, Simulation based Analysis and Modeling of Construction Operations, Construction Productivity, Solid and Hazardous Waste Management, Sludge Management, Environmental Impact, Risk Assessment, and Management, Hyperspectral Remote Sensing (or) Microwave Remote Sensing (or) AI/ML Applications in Remote sensing and GIS,
AI/ML based research |
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| 5. | **Computer Applications (CA)** | B.Sc. / BCA or any equivalent undergraduate degree and
M.Sc (CS/IT or equivalent) / MCA or any equivalent P.G.degree in relevant discipline
(OR)
B.E. / B.Tech. or equivalent and M.E / M.Tech. / M.S in CSE / IT / Equivalent, and
Ph.D. in any one of the following Specializations: AI/ML, Cybersecurity/Information Security, Data Science/ Data Analytics, Cloud Computing. Software Engineering, Theory of Computation, IoT, Quantum Computing/High Performance Computing, Computer Networks. |
| 6. | **Computer Science and Engineering (CS)** | B.E. / B.Tech. or equivalent in CS / CSE / IT and M.E. / M.Tech. / M.S. in CSE / IT or equivalent and Ph.D. in any one of the following. The equivalent degree will be decided by the department committee.
Specialization: Embedded System, Computer Architecture, Theoretical Computer Science, Human Computer Interaction, Quantum Computing, Distributed Systems & Artificial Intelligence. |
| 7. | **Electrical and Electronics Engineering (EE)** | B.E. / B.Tech. in Electrical and Electronics Engineering / Electrical Engineering
M.E. / M.Tech. in Electrical Machines, Power Systems, Power Electronics, High Voltage Engineering, Control Systems, Robotics, Instrumentation and Control, Bio-medical Instrumentation, Electronics Engineering, Applied Electronics, Embedded Systems, Sensors and IoT, VLSI Systems, Communication Systems, Mechatronics, Avionics, Computer Science and Engineering, Data Analytics, Artificial Intelligence, Machine Learning or Equivalent
Ph.D. in the relevant area. |

8.	**Electronics and Communications Engineering (EC)**	B.E./B.Tech. in Electronics and Communication Engineering, Electronics and Telecommunication Engineering, Electronics Engineering/Technology, Electrical Communication Engineering, Electronics and Electrical Communication Engineering
		M.E. / M.Tech./M.S. in Microelectronics, Embedded System, VLSI System /Design/Technology, Communication Systems, Signal Processing, Sensor and Internet of Things, Artificial intelligence and data science, Machine Learning.
		Ph.D. in Microelectronics, Embedded System, VLSI System/Design/Technology, Communication Systems, RF circuits and Antennas, Signal Processing, Sensor and Internet of Things, Computer Vision and Image Processing, Artificial intelligence and data science, Machine Learning, Quantum technologies, Nano technology, Biomedical Engineering, Medical Electronics, Photonics.
9.	**Energy and Environment (EN)**	B.E. / B.Tech (or) equivalent in Energy Engineering / Renewable Energy Engineering / Mechanical Engineering / Electrical and Electronics / Electrical Engineering / Chemical Engineering.
		M.E. / M.Tech or equivalent in (i) Energy Engineering / Renewable Energy Engineering / Energy Conservation and Management (or) any other relevant Energy Engineering Discipline.
		(ii) Power Electronics / Power Systems / Control Engineering
		(iii) Thermal Engineering / Material Science and Engineering.
		Ph.D. (Preferably from an Energy Centre (or) Energy Department
		Cyber – Physical Energy Systems, Computational & Data Driven Energy Systems, Energy Automation, AI & ML in Energy Systems, Smart Grid Systems, Clean coal, Wind & Hybrid Energy Systems, Batteries, Super Capacitors, Fuel Cells, E-Mobility, Energy Systems Modelling, Simulation & Control, Energy Policy & Planning, Energy Economics.
10.	**Humanities and Social Sciences (HS)**	**For HS- ENGLISH:** B.A., M.A., and Ph.D in English Language/Literature / English Language and Literature
		For HS- ECONOMICS: Any UG degree and PG Degree in Economics/Econometrics Ph.D in Economics
11.	**Instrumentation and Control Engineering (IC)**	B.E. / B.Tech. and M.E./M.Tech. in Electrical sciences with Ph.D. Research Specialization in Semiconductor Fabrication Technology / Micro & Nano Sensors / System-on-Chip Design and Development or Microelectronic circuit design for Instrumentation applications / Optical Instrumentation and Photonic Sensors / Avionics and Space Instrumentation Systems / Automotive instrumentation systems / Embedded Systems and Firmware Development for Instrumentation and Control applications / Artificial intelligence for measurement and control applications / Cyber Physical Systems / OT Cyber Security.

12.	**Management Studies (MG)**	Full-time regular UG degree. 2-year Full-Time MBA with Ph.D. Specialization: Information Management /Systems, General Management (Micro Economics, Macro Economics, Indian Ethos, Legal Aspects of Business), Operations Management, Business Analytics, Fintech
13.	**Mathematics (MA)**	MA/MSc/MS or equivalent in Mathematics/Applied Mathematics/Mathematics and (Scientific) Computing with PhD in Mathematics specializing in one of the following areas: Algebraic Geometry, Harmonic Analysis, Operations Research, Probability and Stochastic Processes, Theoretical Computer Science #Desirable: B.Ed / M.Ed
14.	**Mechanical Engineering (ME)**	B.E./ B.Tech. in Mechanical Engineering. M.E./ M.Tech./M.S. in Design/ Automobile/ Aerospace /Mechatronics / Industrial Safety Engineering/ Industrial Engineering. Ph.D. in Design/ Industrial Safety/ Solid Mechanics/ Automation and Control/ Robotics/ AI and Machine Learning/ Data Analytics/Aerospace/Electric Vehicles /Hydrogen and Fuel Cells /Tribology /Ergonomics /Industrial Engineering.
15.	**Metallurgical and Materials Engineering (MT)**	B.E/B.Tech in Metallurgical and Materials Engineering, Metallurgy, Metallurgical Engineering, Materials Science, Metallurgy and Material Science, Metallurgical Engineering and Materials Science, Materials & Metallurgical Engineering, Materials Engineering, Materials Science and Engineering and ME/MTech/ MS (by Research) in Metallurgy/Metallurgical Engineering / Metallurgical and Materials Engineering / Metallurgical Engineering and Materials Science / Materials Science and Engineering / Materials Engineering / Material Science and Technology/ Semiconductor Materials and Technology/ Computational Materials Engineering/ Steel Technology/ Extractive Metallurgy /Process Metallurgy/ Iron making and Steel Making/ Mineral Processing/Advanced Materials / Functional Materials/Physical Metallurgy / Mechanical Metallurgy/ Industrial Metallurgy/ Welding Engineering/ Foundry Engineering/ Welding Technology and Non-Destructive Testing/ Ceramic Engineering/ Ceramic Technology/ Electronic Ceramics/ Polymer Engineering/ Polymer Science and Technology/ Nanotechnology/ Corrosion Science & Engineering/ Bioengineering/ Related specializations of Metallurgy and Materials Engineering. and Ph.D. (or Direct PhD after BE/BTech) with specialization in Semiconductor Materials and Devices/ Materials for Renewable energy/ AI and ML in Materials Engineering/ Computational Materials Science/ Integrated Computational Materials Engineering/ Hydrogen storage Materials/ Sustainable Materials and Processes/ Additive Manufacturing/ Digital Twin Technology in Materials Engineering/ Magnetic Materials/ Electronic

		materials/Non-crystalline Materials/ High Temperature Materials/Nuclear Materials/ Strategic Materials for Space and Defence/ Smart Materials/ Metal recovery from (E-) waste/ Process Metallurgy/Extractive Metallurgy/ Green Steel Making/ Iron making and Steel Making/ Mineral Processing/ Rare Earth Processing/Solidification Processing/Non-ferrous foundry practice/Physical Metallurgy/ Non-destructive testing/ Ceramic Engineering /Polymer Technology / Electro-chemical Engineering/ Nanotechnology/ Functional Materials/Materials for Nanophotonics/ Fuel Cells / Recycling of Materials/ Rare Earth Processing /Surface Engineering/ Biomaterials and Medical Devices/ Advanced Manufacturing Processes/ Advanced Materials Processing/ Robotics & Automation in Materials Engineering/ Circular Economy/Any Emerging Areas of Specialization related to Metallurgy, Materials Science and Materials Engineering.
16.	**Physics (PH)**	UG: Bachelor's degree in Physics PG: M.Sc. Physics/Applied Physics/Material Science or Integrated M.Sc in Physics Ph. D with following Specializations Theoretical Quantum Science and Technology: Quantum computing and Algorithms, Quantum Communication and Cryptography, Quantum Sensing and Meteorology, Quantum Optics Theoretical condensed Matter: Topological Quantum Matter, Soft and Living Matter and Non-equilibrium physics and dynamics. Non-Destructive Testing (NDT) Advanced Non-Destructive Evaluation (NDE) Techniques # Desirable: B.Ed/M.Ed
17.	**Production Engineering (PR)**	B.E. / B.Tech. in Production / Manufacturing / Mechanical / Industrial Engineering/ Mechatronics / Automobile Engineering. M.E. / M.Tech. / M.S. in Manufacturing Technology, Production Technology, Production Engineering, Manufacturing Engineering, Manufacturing Science, Industrial Engineering, Industrial Management, Industrial Systems Engineering, Operations Research, Operations Management, Supply Chain Management, Supply Chain Analytics, Logistics Management, CIM, Maintenance Engineering, Product design and development, CAD & Manufacturing, Mechatronics Engineering, CAD/CAM and Automation, Additive Manufacturing, Integrated Design and Manufacturing, Artificial Intelligence and Machine Learning, Data Analytics, and Data science. Ph.D. field of Specialization: Operations Research, Operations Management, Supply Chain Management, Supply Chain Analytics, Logistics Management, Data Analytics / Data Science, Maintenance Engineering, Quality Engineering, Flexible Manufacturing, Smart Manufacturing, Digital Manufacturing, Supply Chain Management, System simulation, Robotics, Automation, Industry 4.0, Artificial Intelligence and Machine Learning, Data Analytics, and Data science, Quantum and Edge Computing in Manufacturing Technology, Quantum and Edge Computing in Industrial Engineering.

18.	**Education (ED)**	PG degree in relevant subject (Psychology/Physics/Chemistry/Mathematics)
		B.Ed, M.Ed. / M.Ed. with specialisation
		Ph.D. in Education
		Desirable: National Eligibility Test or State Level Eligibility Test