राष्ट्रीय प्रौद्योगिकी संस्थान जमशेदपुर
जमशेदपुर -831014 , झारखण्ड , भारत
National Institute of Technology Jamshedpur
Jamshedpur- 831014, Jharkhand, India

INFORMATION BROCHURE

FOR ADMISSION TO

Ph.D PROGRAMME

ACADEMIC SESSION 2025-26

(AUTUMN SEMESTER)

राष्ट्रीय प्रौद्योगिकी संस्थान जमशेदपुर
जमशेदपुर -831014 , झारखण्ड , भारत
National Institute of Technology Jamshedpur
Jamshedpur- 831014, Jharkhand, India

Ref. No. NITJSR/ACD/2025/93 **Dated: 21/04/2025**

NOTICE – S –21/2025

Admission to Ph.D. Programme for Autumn Semester AY 2025-26

Link for online application: https://online.nitjsr.ac.in/phd2025

Last date for receipt of application forms: 16/05/2025 (Friday)

INFORMATION BROCHURE

1. About the Institute

National Institute of Technology (NIT) Jamshedpur is an Institution of National Importance set up by an Act of Parliament (Act 29 of 2007) namely, the National Institutes of Technology Act, 2007. As per the provisions of the said Act, NIT Jamshedpur offers academic programmes: B. Tech., M. Tech., MCA, M. Sc., M.Des and Ph.D. in various disciplines. NIT Jamshedpur has well qualified and experienced faculty and dedicated supporting staff.

2. Admission to Ph.D. Programme for Autumn Semester AY 2025-26.

2.1 Name of the Departments offering the Ph.D. Programme and Research Areas

Sl. No.	Name of the Department	Broad Research Areas offered for all PhD Programmes in the Department
1	Civil Engineering (CE)	Structural Engineering, Concrete Technology, Earthquake Engineering, Offshore Structure, Soil Structure Interaction, Geotechnical Engineering, Vibration and Stability, Stability Analysis, Foundation Engineering, Ground Improvement, Reinforced Earth, Geo-Environmental Engineering., Geo-synthetics Engineering, Transportation Engineering, Pavement Design, Traffic Engineering, Water Resources Engineering, Open Channel Hydraulics, Hydrology, Water Structure Interaction, Water Resource Managements, Computational Fluid Dynamics. Development of alternative road materials and charging of electric vehicles during running on roads.
2	Computer Science and Engineering (CS)	Supply Chain Management, Data Mining, Computational Complexity, Software Engineering, Soft Computing, system reliability modeling and analysis, software reliability, machine learning, pattern recognition, data analytics, IOT, Network Security, Image Processing, Comp Networks, Database Analysis, Machine learning, Pattern Recognition
3	Electrical Engineering (EE)	Control Systems, Power Systems, Power Electronics, Power System Protection, Renewable Energy Systems, Electrical Machines and Drives, Control of Robotic manipulators and drones, Electric Vehicles, FACTS, artificial intelligence and machine learning and HVDC, smart grid and micro grid.
4	Electronics and Communication Engineering (EC)	Communication Systems, Computer Networking, MEMS Microelectronics & VLSI Design, Circuit & Devices, Signals & System, Image Processing, Microwave, Antenna and R/F Engineering, Embedded System & IoT, Soft Computing, Industrial Electronics & Drives, Artificial Intelligence, Nanotechnology, Micro/Nano Sensor, Underwater Communication, Wireless Sensor Network.
5	Mechanical Engineering	Machine Design**:** Composite Materials, Vibrations and Dynamics, Failure and Fracture Mechanics, Biomechanics, Design and Dynamic analysis of Mechanical Systems, Structural Mechanics, Robotics and automation,

	(ME)	Noise control, CAD /CAM, FEM, Value Engineering, TPM, TQM and SCM Thermal Engineering: Heat & Mass Transfer, Solar Energy and other Renewable Energy, Energy Systems, I.C. Engines, Gas turbines, Refrigeration and Air-Conditioning, Thermo-Fluids, Nano-fluids, Rheology, Turbo-machines, CFD, Tribology, Design- Composites Structures, Bio-implants,
6	Metallurgical and Materials Engineering (MM)	Physical Metallurgy, Phase Transformation, Extractive Metallurgy, Surface Engineering, Biomaterials, Rapid solidification, Nanotechnology, Powder Metallurgy, Mineral Beneficiation, Functional Materials and High temperature materials Ceramics, Polymers and Composites.
7	Production and Industrial Engineering (PI)	Manufacturing Processes, Product Design and Development, CAD/CAM and Robotics, Industrial Engineering and Management, Advanced Materials, Manufacturing Systems Engineering, Energy Management, Non-traditional Manufacturing, Supply Chain Management, Operation Research/Operations Management, Decision Making, Advanced Fusion Welding, Process Monitoring and Control, Friction Stir Processing, Artificial Intelligence.
8	Chemistry (CH)	Organic Chemistry, Analytical Chemistry, Computational Chemistry, Physical Chemistry: Surface Chemistry & Molecular Spectroscopy, Inorganic Chemistry: Organometallics, Homogeneous & Heterogeneous Catalysis, Environmental Chemistry: Waste Disposal Management, Aerosols, Decontamination of Water & Atmospheric Chemistry, Materials Science: Nanomaterials and Alternative Energy Materials.
9	Humanities, Social Sciences and Management (HS)	Literature, Financial Inclusion, Micro-Finance, Financial Wellbeing, Ethics, Policy Studies, Livelihood, Sustainable Finance, Entrepreneurship, Marketing Management, Strategic Management, General Management, Stress Management, Organizational Behaviour, Change Management, Organizational Development, Leadership Development, Emotional Intelligence, Human Resource Management, Strategic Human Resource Management, Mindfulness & Resilience, Conflict Management, Industrial Relations, Employee Welfare & Administration, Compensation Management, Labour Laws, Yoga and Science of Living Systems, Workplace Spirituality, Workplace Deviance & Bullying, Mental Health, Human Psychology, HR Analytics, AI in HR, Blockchain Technology in HR, Innovation, Competition Policy, Public Policy, Economics of Strategy, CSR & Corporate Governance, ICT in ELT, Bilingualism and Multilingualism, Assessment and Evaluation, Critical Pedagogy, English Language Creativity, Second Language Acquisition, Task-based Language Teaching, Folk Studies, Contemporary Dalit Literature, and Gender Studies.
10	Mathematics (MA)	Operation Research, Statistics, Complex analysis, Special functions, Linear algebra, Matrix theory, Control theory, Integral Equations. Fluid dynamics, Sediment transport, Magneto hydrodynamics, Numerical analysis, Cryptography, Network security, Commutative and Computational algebra. Differential Equations. wavelet methods
11	Physics (PH)	Laser Applications, Nuclear Physics, Experimental condensed matter physics (magnetism, strongly correlated system), Nano- materials and molecular spectroscopy, Computational Physics, Functional Materials, Cosmology and Astrophysics

2.2 Specific Area of Research (see Annexure-II)

Note: Further details about department specific specializations and notifications can be found on departmental webpage from the institute website. Research area is indicative only and subject to willingness and availability of the supervisor.

2.3 Categories of Ph. D. Programme

(a) Full-Time Registration Programme (FRP)

i. **Institute Sponsored Full-Time Registration Programme (IS-FRP)**
Research scholars under this category are entitled for fellowship from the Institute as per Ministry of Education (MoE) norms. The candidate must have qualified GATE/NET or any other equivalent examination recognised by MoE for award of fellowship. Reservations for SC/ST/OBC/PWD/EWS are applicable as per GoI norms only for this category.

ii. Project Sponsored Full-Time Registration Programme (PS-FRP)
Research scholars under this category who receives financial support from CSIR/UGC/DST/AICTE/ QIP Scheme or any other equivalent fellowship scheme recognized by GoI or from Institutions/Organizations/Industries under study leave/sponsored project fellows (JRF) of NIT Jamshedpur.

Foreign students under this category shall be sponsored by their Government or by Govt. of India (ICCR/Ministry of External Affair (MEA)/ Study-in-India, New Delhi or other such organizations/agencies).

iii. Self-Sponsored Full-Time Registration Programme (SS-FRP)
Research scholars under this category support themselves financially during entire period of PhD.

iv. Direct Full-Time Registration Programme (DR-FRP)
Research scholars under this category gets an opportunity to earn a doctorate just after the Four Year Bachelor's degree in Humanities/Social Sciences/Management/ Literature/ Engineering/Technology/Science/ Computer application.

Research scholars under this category are entitled for fellowship from the Institute as per Ministry of Education (MoE) norms. The candidate must have qualified GATE/NET or any other equivalent examination recognised by MoE for award of fellowship. Reservations for SC/ST/OBC/PWD/EWS are applicable as per GoI norms only for this category. Research scholars under this category have to do the additional course work as per the rules.

(b) External Registration Programme (ERP)

i. Self-Sponsored External Registration Programme (SS-ERP)
Research scholars under this category are those who are regular working/non-working personnel of Institutions/Defense research/R&D/Industries/Regular faculty members. Research scholars under this category support themselves financially during entire period of PhD.

ii. Direct External Registration Programme (DR-ERP)

Research scholars under this category gets an opportunity to earn a doctorate just after the Four Year Bachelor's degree in Humanities/Social Sciences/Management/ Literature/ Engineering/Technology/Science/ Computer application.

Research scholars under this category are those who are regular working/non-working personnel of Institutions/Defense research/R&D/Industries/Regular faculty members. Research scholars under this category support themselves financially during entire period of PhD. Research scholars under this category have to do the additional course work as per the rules.

iii. Faculty/Staff/Sponsored Project Fellow of NIT Jamshedpur (FS-ERP)

Regular faculty members, regular staff members and sponsored project fellows of NIT Jamshedpur are eligible for admission to Ph. D program in concerned or other Departments.

Note:
All Research scholars under External Registration Programme (ERP) category may avail the provision of Joint Guidance from the parent organization. They shall be required to furnish No Objection Certificate (NOC) from their employer. Non-working personal need not to produce NOC.

2.4 Eligibility

All candidates seeking admissions in the doctoral programme shall have to possess requisite Marks/grades in qualifying examinations as enlisted below.

A. Ph.D. in Engineering/Sciences

Master's Degree in Engineering/Technology/Science/Management/Computer Application with minimum 60% marks or equivalent Cumulative Grade Point Average (CGPA) / Cumulative Performance Index (CPI) 6.5.

OR

Four year Bachelor's degree in Engineering/Technology/Science/Management/Computer Application with minimum 80% marks or equivalent Cumulative Grade Point Average (CGPA) / Cumulative Performance Index (CPI) 8.5.

OR

Applicants under External Registration Programme (ERP) having more than 5 years' of experience should have minimum 60% of marks or Cumulative Grade Point Average (CGPA)/Cumulative Performance Index (CPI) 6.5 at Four year Bachelor's degree in Engineering/Technology/Science/ Computer application.

B. PhD in Humanities, Social Sciences and Management

Master's Degree in Humanities/Social Sciences/Management/ Literature/ Engineering/Technology/ Science/ Computer application with a minimum 60% marks or equivalent Cumulative Grade Point Average (CGPA) / Cumulative Performance Index (CPI) 6.5.

OR

Four year Bachelor's degree in Humanities/Social Sciences/Management/ Literature/ Engineering/Technology/Science/ Computer application 80 % marks or equivalent Cumulative Grade Point Average (CGPA) / Cumulative Performance Index (CPI) 8.5.

OR

Applicants under External Registration Programme (ERP) having more than 5 years' of experience should have minimum 60% of marks or Cumulative Grade Point Average (CGPA)/Cumulative Performance Index (CPI) 6.5 at Four year Bachelor's degree in Humanities/Social Sciences/ Management/ Literature/ Engineering/Technology/Science/Computer application.

2.5 Vacancy

Vacancy in various department under Institute Sponsored Full-Time Registration Programme (IS-FRP) and Direct Full-Time Registration Programme (DR-FRP) are given below.

Department	CH	CE	CS	HS	EC	EE	MA	ME	MM	PI	PH	Interdisciplinary*	Total
Vacancy	8	20	17	5	15	15	9	23	11	10	6	11	150

***** *Interdisciplinary is optional for candidates. They may give their choice (Yes/No) in the application form.*

**Interdisciplinary is for IS-FRP and DR-FRP category only. Interdisciplinary research area requires maximum two faculty members to join together to supervise the PhD work of a student (one main supervisor and co-supervisor) from other departments (not from the same department) or equivalent academic/research Institutes/organizations (national/international), not from the Private Institutions/Organizations.*

3.0 Selection Procedure

Candidates who possess qualifications as laid down in Section 2.4 are eligible for admission to the PhD program on the basis of:

Written Examination and interview conducted by the Institute/Department/Centre with the weightage as:

i. Written Examination– 50%
ii. Interview–30%
iii. Academic credentials – 20%

The selection procedure for admission to Doctoral Programme is based on consistently good academic record throughout and test/interview performance. Reservations for SC/ST/OBC/PWD/EWS are applicable as per GoI norms.

All candidates seeking admission to Doctoral Programme should fulfill the appropriate standards of medical fitness. The Institute Medical Board's opinion in regard to the medical fitness of a candidate shall be final.

4.0 How to Apply

The candidates are advised to fill their application form only through online mode and pay the requisite fee through SBI Collect.
The online application form and the information brochure for admission to Ph.D. programme are available at https://online.nitjsr.ac.in/phd2025 in the institute website www.nitjsr.ac.in

Application Fee

Full-Time Registration Programme (FRP)	Rs. 1,000/- for OPEN/OBC/ EWS candidates Rs. 500/- in the case of SC/ST/PWD candidates.
External Registration Programme (ERP)	Rs. 1,000/- for all

- The candidates who are employed and wish to do Ph.D. must submit SPONSORSHIP/ NO OBJECTION CERTIFICATE from the employer at the time of admission, without which admission will not be possible.

- The following documents are required while filling the application form:
  - ✓ Proof of Payment
  - ✓ Self-attested copy of SSC in support of Date of Birth
  - ✓ Self-attested copy of intermediate /(10+2) Certificate
  - ✓ Self-attested copies of Degree certificates and Mark sheets of all the qualifying examinations
  - ✓ Self-attested copy of the caste certificate (in case of SC/ST candidates)
  - ✓ For OBC candidates, self-attested copy of OBC certificate issued after 31/03/2025 only as per the format given in the Annexure-I is accepted
  - ✓ Candidates with 40% and more physical disability, would be considered as PwD Candidates
  - ✓ Self-attested Proof documents of GATE/NET or any other equivalent examination recognized by MoE for award of fellowship
  - ✓ Self-attested Proof documents of CSIR/UGC/DST/AICTE/ QIP Scheme or any other equivalent fellowship scheme
  - ✓ Self-attested copy of EWS certificate issued after 31/03/2025 by the competent authority.
  - ✓ Self-attested Proof documents of ICCR/MEAs/Study in India etc. (if any)
  - ✓ List of publications (if any)

5.0 Important Dates

Advertisement on the Institute website	21/04/2025 (Monday)
Last date for receipt of application forms	16/05/2025 (Friday)
Intimation regarding written test and interview call to be uploaded on institute website	23/05/2025 (Friday)
Date of written test and interview at NIT Jamshedpur	30/05/2025 (Friday)
Date of announcement of results	06/06/2025 (Friday)
Date of admission	16/06/2025 (Monday)
Commencement of Classes for Autumn Semester	28/07/2025 (Monday)

Note: Students may require staying one more day if interview is not completed on scheduled date.

6.0 GENERAL INSTRUCTIONS

- Link for online application: **https://online.nitjsr.ac.in/phd2025**
- Candidates should specify broad areas of research in the application form.
- All candidates seeking admission to Ph. D. Programme are required to fill and upload their application from (online) along with all required documents by **16/05/2025 (Friday).**
- Non-working personal need not to produce NOC under ERP category.
- If a candidate is applying in more than one department, then he/she should fill separate application forms with the prescribed application fee for each department separately.
- List of short-listed candidates for the written test and interview will be uploaded on the Institute website only.
- The candidates are required to visit our website for fee structure/faculty expertise etc. and also advised to visit our website regularly for updated information about the admission to Ph.D. Programme for AY 2025-26.
- No separate interview letter / communication will be sent to any individual.
- All candidates selected for admission shall be required to deposit the fee as per the fee structure applicable at the time of admission.
- Candidates need not to send the hard copy of applications.
- For any technical query, contact at phdadmission@nitjsr.ac.in
- For any administrative query, contact at dean.ac@nitjsr.ac.in

ANNEXURE- I

Proforma for Other Backward Class (OBC Certificate)

(CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES APPLYING FOR ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER GOVERNMENT OF INDIA)

This is to certify that Shri/Smt./Kum. _____Son/Daughter of Shri/Smt._____of Village/Town

_____ district/Division

_____in the_____State belongs to the

_____Community which is recognized as a backward class under:

i) Resolution No. 12011/68/93- BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No.186 dated 13/09/93.

ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.

iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.

iv) Resolution No. 12011/96/94-BCC dated 09/03/96.

v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96. vi) Resolution No. 12011/13/97-BCC dated 03/12/97.

vi) Resolution No. 12011/99/94-BCC dated 11/12/97.

vii) viii) Resolution No. 12011/68/98-BCC dated 27/10/99.

ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.

x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71dated 04/04/2000.

xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No.210 dated 21/09/2000. xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.

xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.

xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.

xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No.210 dated 16/01/2006.

Shri/Smt./Kum._____and/or his family ordinarily reside(s) in the

_____District/Division of_____State. This is also to certify that he/she does not belong to the Persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Govrnment of India, Department of Personnel & Training O.M. No. 36012/22/93-Estt.(SCT) dated 08/09/93 which is modified vide OM No. 36033/3/2004 Estt. (Res.) dated 09/03/2004 or the latest notification of the Government of India.

District Magistrate/Competent Authority with Seal

Dated:

NOTE:

(a) The term “Ordinarily” used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

(b) The authorities competent to issue Caste Certificates are indicated below:

i) District Magistrate / Additional Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner /Deputy Collector / 1st Class Stipendiary

Magistrate / Sub-Divisional Magistrate /Taluka Magistrate / Executive Magistrate / Extra st Assistant Commissioner (not below the rank of 1 Class Stipendiary Magistrate)

ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.

iii) Revenue Officer not below the rank of Tehsildar’ and iv) Sub- Divisional Officer of the area where the candidate and / or his family resides.

(c) The annual income /status of the parents of the applicant should be based on financial year ending March 31, 2025.

Declaration /undertaking - for OBC Candidates only

I,_____Son/Daughter of Shri _____

resident of village/town/city_____district_____State hereby declare that I belong to the_____community which is recognized as a backward class by the Government of India for the purpose of reservation in services admission in Central Government Institutions as per orders contained in Department of Personnel and Training Office Memorandum No. 36012/22/93 – Estt. (SCT), dated 8/9/1993. It is also declared that I do not belong to persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the above referred Office Memorandum, dated 8/9/1993, which is modified vide Department of Personnel and Training Office Memorandum No. 36033/3/2004 Estt. (Res.) dated 9/3/2004 or the latest notification of the Government of India.

I also declare that the condition of status/annual income for creamy layer of my parents/guardian is within prescribed limits as on financial year ending on March 31, 2025.

Place: **Signature of the Candidate**

Date:

Declaration/undertaking not signed by Candidates will be rejected

No-Objection Certificate for External Registration Programme (ERP) PhD Category Candidates

(This should be typed on the letter head of the employee's organization)

Reference No.: ..……

Date: ……..……

To
The Director
National Institute of Technology
Jamshedpur

Sub.: No-Objection Certificate for pursuing External Registration Programme (ERP) PhD Category at NIT Jamshedpur

Dear Sir,

We have no objection if Mr./Ms.....an employee of our organization/ institute, is admitted to the Ph.D. Programme in the Department of / Center for ..... at NIT Jamshedpur as a External Registration Programme (ERP) PhD Category student.

It is certified that he/ she has completed …….. year of service in our organization/ institute as a regular employee.

We shall give him/her leave of absence at our organization to attend classes of course work of Ph.D. programme at NIT Jamshedpur.

Signature & Seal of Head of the Organization/ Institute

Name of the Faculty	Name of the Department	Area of Research
Dr J.Jayapal	CE	Geosynthetics for Soft Clay Treatment, Numerical Modelling Using PLAXIS 2D & 3D
Dr Awdhesh K Choudhary	CE	Reinforced Soil Structures, Anchored Structures, Utilization of Industrial Waste in Construction, Ground Improvement, Studies on the Behaviour of Foundation System, Physical and Numerical Modeling, Application of Reinforcement in Pavement, Utilization of Industrial Waste in Construction, Geophysical Investigations
Dr. ABDHESH KUMAR SINHA	CE	* Low cost roads *Pavement Material Characterization *Pavement Analysis and Design *Highway Construction and Quality Control *Pavement Evaluation and Maintenance *Traffic Engineering
Dr. Arnab kumar Sinha	CE	Development of Sustainable material, Retrofitting and Rehabilitation
Dr. Ch. Madhusudana Rao	CE	Water Resources Engineering, Hydrology, Flood Routing and Forecasting, Dam brake analysis, Open Channel Hydraulics, Climate change impacts, River-basin management, Soil erosion, Landslide, Lake dynamics, Entropy, Geospatial technology, IoT, ML and AI applications in Water Resources Engineering, Water Quality Assessment
Dr. Manthirikul Sandeep	CE	Traffic Engineering, Transportation Simulation and Modelling, Pavement Material Characterization, Sustainable Roads, Low volume rural roads
Dr. Prahlad Prasad	CE	Performance Based Seismic & Wind Design, Structural Health Monitoring, Earthquake Engineering, Life Assessment & Enhancement
Dr. Sanjay Kumar	CE	Self Healing Concrete and Self Compacting Concrete; Geopolymer Concrete, Fiber Reinforced Concrete, Recycled Concrete
Dr. Somenath Mondal	CE	Geotechnical Engineering, Environmental Geotechnology
Dr. Subhadeep Metya	CE	Landslide Risk Assessment and Mitigation, Valorization of Wastes for Sustainable Development, Geotechnical Earthquake Engineering, Application of AI and ML in Civil Engineering
Dr. Suravi Pal	CE	Grond improvement, numerical modelling
Dr. Utpal Ghosh	CE	Degradation of Emerging Pollutants, Phytoremediation of contaminated water and soil
K K SHARMA	CE	GEOPHYSICS, SUSTAINABLE MATERIALS, STRUCTURAL STEEL CONNECTIONS
Prof. Virendra Kumar	CE	Fire resistance of reinforced concrete structures, Structural dynamics, Earthquake resistant structures, Concrete technology, Development of new cementitious materials, Utilization of waste material, Durability of structures, Structural health monitoring of structures, Retrofitting & Strengthening of RCC Structures
S. K. Raja	CE	Unsaturated behavior of stabilized soils
Sangeeta Kumari	CE	Water Resources Engineering, Climate Change Impacts on Hydrological Process, Water Resources System Analysis and Management
Sounak Kabasi	CE	AI/ML in structural engineering, computational mechanics, Form-active structures
Dr Prabhat Kumar	Chemistry	Organic Synthesis, Materials Chemistry
Dr. Ananta Kumar Atta	Chemistry	Sensing materials, Carbohydrates, Supramolecular chemistry, Theoretical chemistry, Organic, Inorganic and Physical chemistry
Dr. Balram Ambade	Chemistry	Environmental Chemistry, Atmospheric Chemistry, Waste management, Recovery of precious metals from e waste. Water Research
Dr. Naveen Kumar Veldurthi	Chemistry	Nanomaterials for energy and environmental applications
Dr. Subrata Mahanta	Chemistry	Molecular Spectroscopy, Theoretical Chemistry, Biophysical Chemistry
Dr. Titas Kumar Mukhopadhyay	Chemistry	Computational Modelling of Bio-nano Interactions, Nanotoxicity, Low-dimensional Nanomaterials, Drug Delivery & Discovery, Classical Molecular Dynamics Simulations, Density Functional Theory, Reaction Mechanisms, Catalysis.
MOUMITA MONDAL	Chemistry	ORGANOMETALLIC AND INORGANIC CHEMISTRY
Sudhanshu Shekahr Pati	Chemistry	Electrochemical Water Splitting, Sensor, Nanomaterials Chemistry
Tapas Das	Chemistry	Organic Synthesis (Asymmetric Synthesis, C-H activation, Photoredox)
Alekha Kumar Mishra	CSE	Cryptography and Network Security, Internet of Things and Applications, Routing in Resource Constrained Networks, and Security Threat Modelling and Analysis
Amit Majumder	CSE	Natural Language Processing, Machine Learning, Deep Learning, Computer Vision
Dr Arijit Das	CSE	AI, Deep Learning, Natural Language Processing
Dr Binod Kumar Singh	CSE	Image Processing, Information Security, Network Security, Cloud Computing, etc.
Dr Dilip Kumar	CSE	ML/AI, Optimization

Dr. B Ramachandra Reddy	CSE	Software Engineering, Machine Learning
Dr. C S Azad	CSE	Machine Learning, Deep Learning, Feature Selection, NLP, Intrusion Detection System, Data Mining, Nature Inspired Algorithm
Dr. Deepak Rai	CSE	Image Processing, Software Defined Networking, Biomedical Signal Analysis, Applied ML and DL
Dr. Dilip Kumar Shaw	CSE	Optimization, Security, Data Mining and Quantum Computation
Dr. Dinesh Kumar	CSE	Fog,Edge and Cloud Computing, Resource Allocation/Management in Distributed Systems, Internet of Things, AI-driven Optimization, Blockchain
Dr. Diwakar Tripathi	CSE	Machine Learning
Dr. Jitesh Pradhan	CSE	DNA Computing, Image Processing, ML, DL, and Medical Image Processing
Dr. Mayukh Sarkar	CSE	Quantum Computing, Machine Learning, Deep Learning
Dr. Pampa Howladar	CSE	Machine Learning and Deep learning for Biomedical Applications
Dr. Rakesh Kumar	CSE	Embedded Systems, Internet of Things, Cloud Computing
Dr. Subrata Dutta	CSE	IoT, Deep Learning, Machine Learning, Smart City, WSN, Evaluationary Computing
Dr. Suchismita Mahato	CSE	Graph Theory, Bioinformatics, Cheminformatics, Health Care Data Analytics
Koushlendra Kumar Singh	CSE	AI, Satellite Imagine, NLP, fMRI
Nidhi Kushwaha	CSE	Recommender systems, Deep Learning, Semantic web, Data Mining
Rajiv Ranjan Suman	CSE	Image Processing, Data Security, Machine Learning
Amit Prakash	ECE	Wireless communication, Sensor. VLSI. Machine learning applications
Basanta Bhowmik	ECE	Micro/nano sensor, nanotechnology, VLSI
Basudeba Behera	ECE	Micro electromechanical Systems (MEMS/NEMS), Sensors, Actuators, Internet of Things, Embedded Systems
Chandradeep Singh	ECE	Wireless Communication, Quantum Communication, Application of AI in Next Generation Communication Systems
Dr Rashmi Sinha	ECE	Solar Antenna design, metamaterial applicaions, Wearable Devices
Dr. Amit Kumar	ECE	Fabrication/Simulation and characterisation of Semiconducting Devices
Dr. Arjun Kumar	ECE	High Power Microwave Devices, Metamaterial assisted Devices, Antenna, Computational Electromagnetics
Dr. Jayendra Kumar	ECE	Image processing, IoT, Embedded system, Robotics,
Dr. Kaushik Das	ECE	FPGA and ASIC-based Designs, VLSI Signal Processing, Digital VLSI
Dr. Mayank Srivastava	ECE	Analog Integrated Circuits, Analog Microelectronics Circuits, Memristor Designing
Dr. Mrutyunjay Rout	ECE	Cyber Physical System, Signal Processing, Smart Sensors and WSN
Dr. Munendra Singh	ECE	Deep Learning, Image Processing and Machine Vision, Medical Imaging
Dr. Nagendra Kumar	ECE	Wireless and Mobile Communications, Unmanned Aerial Vehicles (UAVs)-Assisted Communications, Radio Frequency (RF) Energy Harvesting, Tera-Hertz (THz) Communications, Intelligent Reflecting Surfaces (IRSs)-Assisted Communications, Fading Channels
Dr. Prashant Kumar	ECE	Underwater acoustic communication, Wireless communication, FPGA-based modem design, microscale energy harvesting, AI-based wearable devices, D2d communication
Dr. Rajashree Nayak	ECE	Artificial Intelligence, Image Processing, Biomedical Image Analysis, AI driven IoT
Dr. Surajit Kundu	ECE	Antenna Engineering, Wireless Communication, IoT, Microwave Engineering
Dr. Swagatadeb Sahoo	ECE	Dielectric Relaxation Phenomenon, Microwave, Metamaterial, Sensor, Medical Implant, Adulteration detection, Environmental Pollution detection
Alok priyadarshi	EE	Power system, smart grid, microgrid, non renewal energy, power quality
Dr Madhu Singh	EE	Power electronics and drives, renewable energy systems, Electric Vehicle , Machine learning & al application in power system.
Dr. Ananyo Bhattacharya	EE	Power Electronics, Renewable Energy Systems, Electric Vehicle.
Dr. K> Raghavendra Naik	EE	AI applications to EV charging station demand control, Edge computing based defender strategies implementation for Cyber security applications
Dr. Kundan Kumar	EE	Propulsion Drive System for EVs using Wide Bandgap Semiconductor Devices (i.e. GaN & SiC), Wireless Power Transfer Systems, Dynamic Wireless Charging, High-Efficiency Power Converters, DC-DC Converters
Dr. Ravi Bhushan	EE	Power system stability and control, Load frequency control, Renewable energy (Wind and Solar), Optimal control, Electric vehicles.
Dr. Shubhranshu Kumar Tiwary	EE	Power System Security with Deep Learning Methods, Power Quality Improvement, Power System Stability, Application of Big Data Analytics for Power System Security.
Dr. Simanta Kumar Samal	EE	Power Electronics (Power processor for solar PV applications, EV charging and bi-directional power utilizations)
Dr. Supriyo Das	EE	High Voltage Engineering, Power System
Dr. Suryaprakash	EE	EV charger, DC microgrid, control of the bidirectional DC-DC converter, power electronics converters in distribution systems, renewable energy interconnection, control issues in power systems with inverter-based resources
Dr. Veerpratap Meena	EE	Power system optimization, Net-Zero Energy Grids, Electric Vehicles, Peer-to-Peer Energy Trading, and Healthcare.

Dr.Mrinal Kanti Sarkar	EE	Power Electronics, Electric Vehicle
Omhari Gupta	EE	Microgrids, Renewable energy-based distributed generation, Power system protection, Electric power quality
Prof. K. B. Yadav	EE	Multiphase Electrical Machine, Power System Economics, Power Electronics & Drives
DR SUSHIL KUMAR	HSSM	HRM- (workplace spirituality, workplace deviance & bullying, mental health, human psychology, HR analytics, AI in HR, blockchain technology in HR)
Dr. Bansode Amit Namdev	HSSM	Information and Communication Technology in ELT, Bilingualism and Multilingualism, Language Assessment and Evaluation, Critical Pedagogy, English Language Creativity, Second Language Acquisition, Task-based Language Teaching, Folk studies, Contemporary Dalit literature, and Gender studies.
Dr. Neha Jaiswal	HSSM	Innovation (Patents and R&D), Startup & Entrepreneurship, Sustainable Development Goals, Education, Competition Policy, Public Policy, Economics of Strategy, Strategic Management, General Management, CSR, Corporate Governance, Migration, AI & Data protection
Dr. Shwati Sudha	HSSM	Organisational Behaviour, Change Management, Artificial Intelligence & Emotional Intelligence, Mental Health, Training & Development, Recruitment & Selection, Power & Politics, Workplace Behavior, Leadership, Strategic Management, Strategic Human Resource Management, Human Resource Management, Sustainable Development, Green Human Resource Management, Labour Laws and Administration, Industrial Relations, Organisational Culture, Stress Management
Dr Ratnesh Kumar Mishra	Mathematics	Algebra, Coding theory
Dr SNEHASIS KUNDU	Mathematics	Mathematical Modeling with Machine Learning Approaches, Statistical Mechanics, Information theory and Entropy,
Dr Y RAMU NAIDU	Mathematics	Optimization (Swarm Intelligence, Evolutionary Algorithms)
Dr. Raj Nandkeolyar	Mathematics	Fluid Dynamics, Magnetohydrodynamics, Bio-fluid Mechanics
Dr. Samiran Chakraborty	Mathematics	Functional Analysis, Integral equations
Dr. Shakti Prasad	Mathematics	Statistics, Sampling Theory, Data Science
Dr. Sourav Das	Mathematics	Complex Analysis, Special Functions, Mathematical Analysis
Dr. Sumit Kumar Debnath	Mathematics	Cryptography and Network Security
Dr. Sunil Kumar	Mathematics	Mathematical Modelling, Fractional Calculus, Epidemiological Modelling
Rajat Tripathi	Mathematics	Biofluid Mechanics, Dynamical Systems, Celestial Mechanics
Subha Sarkar	Mathematics	Number Theory, Graph Theory
Ashok Kumar Mandal	ME	Robotics, Vibration, Dynamics, Hyperelasticity
Dr. Abhijit Dey	ME	Composite materials, biomaterials, thin film and coatings,machining
Dr. Alok Kumar Ray	ME	Thermofluids, Phase change materials, Sustainability, Photovoltaic-Thermal, Waste Heat Recovery, Solar thermal systems, Thermal management of Li-ion battery
Dr. Arvind Kumar Patel	ME	cooling technology, renewable energy, Hydrogen engine, human thermal comfort
Dr. Deepak Kumar	ME	Composite Materials, Fracture and Failure, Nanocomposite, Energy Storage Materials and Devices, Tissue Engineering, Architected materials, Data Driven Materials Design
Dr. Dulari Hansdah	ME	Waste to Energy and Management, Hydrogen Energy Production and Utilisation, Materials for Energy Storage and Conversion, Emission Control Technology, and Biofuels.
Dr. Pranab Kumar Kundu	ME	Microfluidics, Micro heat spreader, Natural Convection, CFD, BTMS, Machining, Thermal Assisted machining, Microchannels assisted machining, Grinding, EDM,
Dr. Rinku Kumar Gouda	ME	heat transfer
Dr. Shashank Pandey	ME	Composite Structures
Dr. Vijay Kumar Dalla	ME	Robotics & Automation
M A Hasan	ME	Nanofluids, Complex fluids
Mrityunjay Kumar Sinha	ME	CFD, Fluid Flow, Free Surface Flow, Heat Transfer, Heat Sink
Prof. Sanjay	ME	Gas Turbine, Hydrogen Energy, Digital-Twin of Thermal Systems
Saikat Ranjan Maity	ME	Thin film coating, EDM, Micro-EDM, USM, AWJM, Laser based Additive Manufacturing, Laser Welding, Metal Matrix Composite Processed through Powder Metallurgy, Multi-criteria Decision Making Techniques, Non-traditional Optimization Methods, Soft Computing, Application of AI & ML in Manufacturing Processes, Digital Twin
Shailesh Kumar Jha	ME	Aerodynamic and aeroacoustic of airfoil
Vishesh Ranjan Kar	ME	Computational Mechanics; Composite Materials
Ashok Kumar	MME	Physical Metallurgy, Fatigue , Fracture, Welding, MD Simulationj
Dr Partha Duley	MME	Alloy design and development, Microstructural analysis, Texture analysis, Deformation studies, Corrosion studies, Light metal alloys like Mg-alloys Al-alloys system

Dr Ram Krishna	**MME**	**Green & Sustainable Metallurgy - Recycling of critical and rare earth metals, Low carbon metal production, High entropy alloys, Process-microstructure-property relation in metal & ceramic 3D Printing, Functional Materials by Additive Manufacturing route, AI/ML in Metallurgy for prediction & optimization of processes, materials for hydrogen storage, radiation resistant materials**
Dr. Amit Patel	**MME**	**Composites, mechanical behavior of steel, failure anaylis through FEM, corrosion of alloys, processing of Polymer composites**
Dr. Anushree Dutta	**MME**	**Microstructure and Mechanical behavior, Deformation mechanisms, Structure property correlation, high temperature mechanical and oxidation behavior, High entropy alloy, automotive steel**
Dr. Ashwinee Kumar	**MME**	**Computational Material Science (MD, DFT), Physical Metallurgy, Mechanical Metallurgy**
Dr. Jichil Majhi	**MME**	**fabrication of Light metal alloys and composites, Microstructure characterization, study of ambient and elevated temperature Mechanical properties, Corrosion behaviour study.**
Dr. Monalisa Mandal	**MME**	**Heat treatment, Characterization, mechanical properties evaluation and correlation with microstructure**
Dr. Prakash Sarkar	**MME**	**Small scale deformation, Thin films, Waste management, Polymer nano-composites**
Dr. Rina Sahu	**MME**	**Mineral benificiation , coal, e -waste recycling process**
Dr. Sanjay Kumar Vajpai	**MME**	**Physical Metallurgy, Powder Metallurgy, Structural and functional Materials**
Dr.Renu kumari	**MME**	**Surface engineering, corrosion biomaterials,physical metallurgy**
ABHISHEK MAJHI	**Physics**	**Relativity, gravity and the foundations; Completeness of Maxwell's equations and towards a non-singular theory of electrodynamics; Foundations of calculus and implications in physics; Completeness of the theory of waves and its implications; Foundations of optics and quantum mechanics**
Neha Agnihotri	**Physics**	**Condensed Matter Physics, Computational Physics**
Rajeev Ranjan	**Physics**	**Material Science, Holography**
UDAY KUMAR	**Physics**	**Classical/Quantum Machine learning in condensed matter physics, spectroscopy, optics and photonics, renewable energy and material science.**
AMARESH KUMAR	**PIE**	**AUTOMATION,INDUSTRY 4.0, INDUSTRIAL ENGINEERING**
Dr Kamal Pal	**PIE**	**Additive Manufacturing, Welding, Machining**
Dr. Dinesh Kumar	**PIE**	**Supply Chain Management, Operations Research, Optimization Techniques, Inventory Theories, Circular Economy**
Dr. Kuntal Maji	**PIE**	**Metal Forming, Additive Manufacturing, FEM & AI/ML in Manufacturing**
Dr. Mayuri Baruah	**PIE**	**Simulation of Manufacturing Process, Laser welding, Machine learning in welding**
Shubham Tripathi	**PIE**	**Supply chain management, Industry 4.0, operations research, optimisation**
Susmita Datta	**PIE**	**Advanced manufacturing techniques, additive manufacturing, non-traditional machining, advanced welding techniques, etc.**