# TENTATIVE AREAS FOR PH.D. ADMISSIONS – 2025-26

## Faculty of Technology and Engineering (Full-Time and Part-Time)

| | Area | Number of Seats |
|---|---|---|
| Chemical Engineering | • Catalysis, Biofuels, Gasification & Pyrolysis<br>• Abatement of Industrial Pollution, Nanotechnology for environmental applications, Advanced Oxidation Processes<br>• Process Integration, Process Simulations, Process Design, Phase Equilibrium<br>• Polymer Technology, polymers in drug delivery<br>• Cleaner production, Green Chemical Engineering, Hydrogen Energy<br>• Multiphase flow, Transport Phenomena, Process Optimization<br>• Air quality monitoring, Climate change | 21 |
| Civil Engineering | • Structural Engineering<br>• Construction Technology and Management, Planning and Scheduling, Construction Safety & Quality management, Digital Construction Technologies, Lean Construction, Contract Management<br>• Geo-Technical Engineering<br>• Geomatics<br>• Concrete Technology, Special Concrete, Construction Materials, Recycled Materials, Repair and Retrofitting of structures<br>• Transportation Engineering<br>• Water and Wastewater Treatment, Environmental Nanotechnology | 18 |
| Computer Engineering | • Machine Learning and Deep Learning, Generative AI, Optimization, Data and Web Mining, Natural Language Processing<br>• Networks, D2D Communication, Wireless Networks<br>• Network Security, Blockchain Technology, Cyber Security<br>• Big Data Analytics, Community Detection and Prediction, Medical Image Processing, ML/DL, Graph mining<br>• Human Computer Interaction (BCI and Eye Tracking), AR/VR, Audio and Speech Processing, Computer Vision<br>• Internet of Things, Geospatial Data Analytics<br>• Healthcare, Image Processing, Satellite Image Analysis | 42 |

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|---|---|---|
| | • Cloud computing and its applications, Quantum Computing, and Cyber Security<br>• IoT and Wireless Networks<br>• Audio and Speech Processing, Machine Learning, Information Retrieval Systems<br>• Natural Language Processing, Machine Learning/Deep Learning, Medical Image Processing, Hyperspectral Image Processing<br>• Wireless Communications, Network Security<br>• AI/ML, Blockchain, EV, Big Data<br>• Analytics, Cyber Security, etc.<br>• Information Retrieval, Machine Learning<br>• Medical image analysis, Medical imaging, AI in healthcare | |
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| Electrical Engineering | • Power Electronics Devices, Converters, Drives, and Power Quality Improvement, Artificial Intelligence based Power Electronic Systems<br>• Electrical Power System Analysis; Power System Dynamics, Modelling, Optimization and Intelligent techniques in Power Systems, Solar and Wind based Renewable integration with Grid, Smart Grid, High Voltage Engineering<br>• Design, Modelling, Performance analysis, and Optimization of Conventional and Advanced Electrical Machines<br>• Electrical Vehicles, On-board and off-board Electric Vehicle Chargers, Battery Management System, etc.<br>• Applications of IoT, Data Analytics, Load and Generation Forecasting in Electrical Engineering, etc.<br>• Generation of Electricity by Waste Water Treatment, Applications of Plasma, Recent topics and innovation in Electrical Engineering<br>• Power electronic converters, On-board and off-board electric vehicle charger, battery management system for electric vehicle, renewable integration with grid, generation of electricity by waste water treatment<br>• Electrical Power Systems | 14 |
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| Electronics & Instrumentation Engineering | • Control Engineering, Soft computing Applications, Industrial Control System Design<br>• Vision Systems, Deep Learning, Industrial Automation<br>• Industrial Automation & Robotics, Biomedical Instrumentation, Industrial | 18 |

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|---|---|---|---|
| | | • Applications of Machine Learning, Sensors & Measurement Techniques<br>• Image and Signal Processing<br>• Embedded system for automation, Power electronics<br>• Signal, image and Video Processing, Machine Learning/Deep Learning, Healthcare Data processing, IoT, and WSN | |
| Mechanical Engineering | | • Thermal and Fluid Engineering<br>• Renewable Energy<br>• Thermo-chemical Conversion of biomass/coal -pyrolysis, gasification, combustion<br>• I. C. Engine and Alternate fuels<br>• Multiphase flow<br>• Microfluidics<br>• Turbomachine<br>• Computational Fluid Dynamics and Heat Transfer<br>• Heat Exchangers<br>• Rarefied gas flow<br>• Manufacturing processes and their analysis<br>• Sheet metal forming<br>• Additive Manufacturing, Sustainable manufacturing<br>• Metal Joining and Casting<br>• Microwave based melting<br>• Friction stir processing<br>• Sustainable Machining<br>• Sheet Metal Forming<br>• Advanced Materials<br>• Production and Industrial Engineering<br>• Quality Engineering and Management<br>• Design Engineering<br>• Stress Analysis<br>• Fracture Mechanics and Bio Mechanics<br>• Robotics<br>• Vibration and Condition monitoring of mechanical equipment<br>• Material Science<br>• Machining, Metal forming, Production and operations research.<br>• Machine Design, Vibration, Smart Materials & Structures | 45 |
| | | | |
| Electronics & Communication Engineering | | • Hardware security, VLSI Design, Test and Verification<br>• RF MEMS Design, Analog VLSI Design, Embedded system<br>• Wireless Communication and Networking<br>• Signal and Image Processing<br>• Machine Learning and Computer Vision | 22 |

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|---|---|---|
| | • Cyber Physical System<br>• Digital communication, wireless communication, signal processing and remote sensing.<br>• Wireless, Networks, Internet of Things Embedded Systems<br>• Analog mixed signal VLSI design, High speed Current mode circuit, biological process based analogue circuits design, Chip design for healthcare device application<br>• Image Processing, Computer Vision, Machine Learning and Artificial Intelligence | |
| | | |
| Mathematics | • Mathematics | 06 |
| Humanities and Social Science | • Economics | 02 |
| | • English | 01 |
| | **Total Seats** | **189** |

## Faculty of Pharmacy (For Full-Time& Part-Time)

| Areas of Research | Number of Seats |
|---|---|
| Pharmaceutical Analysis | 04 |
| Pharmaceutical Chemistry | 11 |
| Pharmaceutics | 04 |
| Pharmacognosy | 06 |
| Pharmacology | 09 |
| **Total Seats** | **34** |

## Faculty of Law (For Full-Time& Part-Time)

| Areas of Research | Number of Seats |
|---|---|
| Economics | 02 |
| Law | 08 |
| **Total Seats** | **10** |

## Faculty of Science (For Full-Time& Part-Time)

| Areas of Research | Number of Seats |
|---|---|
| Life Science | 09 |
| Physics | 04 |
| Chemistry | 06 |
| **Total Seats** | **19** |

## Faculty of Architecture & Planning (For Full-Time & Part-Time)

| Areas of Research | Number of Seats |
|---|---|
| Architecture (Urban Planning, Urban Design, Nature Based Solutions, Environmental Management) | 02 |
| **Total Seats** | **02** |

## Faculty of Management (For Full-Time Only)

| Areas of Research | Number of Seats |
|---|---|
| Economics | 03 |
| Finance & Accounting | 08 |
| Marketing | 04 |
| Operations Management & Decision Science | 04 |
| Information Management | 01 |
| Human Resource Management | 02 |
| Strategy & Entrepreneurship | 02 |
| **Total Seats** | **24** |

## Faculty of Management (For Part-Time Only)

| Areas of Research | Number of Seats |
|---|---|
| Economics | 02 |
| Finance & Accounting | 08 |
| Marketing | 02 |
| Operations Management & Decision Science | 02 |
| Human Resource Management | 02 |
| Strategy & Entrepreneurship | 02 |
| **Total Seats** | **18** |