

Doctoral Programmes (Ph.D.)

The Ph.D. programmes are available in various specializations - Biotechnology, Computer Science and Engineering, Electronics and Communication Engineering, Humanities & Social Sciences, Mathematics, Physics & Materials Science and Engineering, Management. The Scholars are required to take up intensive research work under the guidance of a supervisor on a specific problem for a minimum duration as specified. The research work is expected to result in new findings contributing to the advancement of knowledge in the chosen field. The doctoral research programme gives an opportunity to students to demonstrate their analytical, innovative and independent thinking abilities leading to creativity and application of knowledge. The scholars are required to deliver seminars on their research progress regularly and publish their work. Finally, they are required to submit the thesis embodying their research findings for the award of the Ph.D. degree. They are also required to undergo some advanced level course work.

Financial support may be provided to select deserving full time Ph.D. students in the form of Research/Teaching Assistantship.

Research scholars in the areas given below will be preferred, however, scholars interested in other related areas may also be considered.

Biotechnology & Bioinformatics

Microbial and Food Technology, Protein Engineering, Environmental Biotechnology, Natural Products Therapeutics, Medical Biotechnology

Computer Science & Engineering

Image processing, Multimedia Computing, Wireless Sensor Networks, Embedded Systems Software Engineering, Computer Networks and Cyber Security, Machine Learning, Data Mining, Learning Technology, Computer Supported Collaborative Work, Human Computer Interaction.

Computer Applications

Artificial Intelligence (AI), AI Ethics and Responsible AI, Explainable AI (XAI), AI for Healthcare, Federated Learning and Privacy-Preserving AI, Explainable and Interpretable Machine Learning (XIML) and Machine Learning (ML), Natural Language Processing (NLP), Computer Vision, Cybersecurity and Privacy, Internet of Things (IoT), Data Science and Big Data Analytics, Human-Computer Interaction (HCI) and User Experience (UX), Cloud Computing and Distributed Systems, Software Engineering and Development, Quantum Computing, Quantum Machine Learning (QML), Robotic Process Automation (RPA), Cyber-Physical Systems (CPS), Explainable Recommendation Systems.

Electronics & Communication Engineering

Wireless and Optical Communications, Networking and Performance Analysis of Communication Systems, DSP and Digital Filters, Renewable Energy and Smart Grid.

Humanities and Social Science

Sociology-Women Studies, Cultural Studies, Political Sociology, Gerontology; Psychology, Economics- Micro & Macro Economics, Public Finance, Development & Health Economics; Financial Accounting & Evaluation, Corporate Finance, Banking, Indian Literature, Organizational Behaviour, HR Information System, Emotional Intelligence, Social Media & E-Marketing.

Mathematics

Mathematical Analysis, Fractal and Chaos, Computational Continuum Mechanics, Numerical Analysis, Fuzzy and Information Theory, Operation Research, Image Processing.

Physics & Materials Science and Engineering

Nanoscience and Nanomaterials, Advanced Materials, Photonics /Quantum Optics/Quantum Information Theory, Condensed Matter Physics, Plasma Physics.

Management

Human Resource and Organizational Behaviour, Finance, General Management, Marketing, Operations Management and IT.