

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY (JUIT), WAKNAGHAT
DOCTORAL PROGRAMS (Ph.D.) 2021

Ph.D. Programs are available in the following disciplines: Bioinformatics, Biotechnology, Civil Engineering, Computer Science and Engineering, Electronics & Communication Engineering, Humanities & Social Sciences, Mathematics, and Physics & Material Sciences at JUIT Wagnaghat. The scholars are required to undertake intensive research work under the guidance of supervisors on a specific problem for a duration as specified in the Ph D ordinance. The research work is expected to result in new findings contributing to the knowledge in the chosen field. The doctoral research program gives an opportunity to students to demonstrate their analytical, innovative and independent thinking ability, leading to creating new knowledge and showcase its application. They are also required to take part in some advanced level course work. The scholars are required to deliver seminars on their research progress every semester and publish their work in journals of international repute. Finally, they are required to submit the thesis embodying their research findings for examination by an Indian and a foreign expert for the award of the Ph.D.

The following sub areas are identified in the respective disciplines for undertaking research:

Biotechnology, Bioinformatics

The Department of Biotechnology and Bioinformatics possess a vision to produce professionals with leadership quality in technology, creativity, innovation and entrepreneurship. Apart from UG and PG programs, the department is having PhD programs in Biotechnology and Bioinformatics. The department is equipped with state of the art laboratories with sophisticated instrumentation facilities and workstations. The faculty works in diverse areas of research and trained from reputed national and international organizations of repute. The department received research funding from DBT, DST, ICMR, DRDO, MOEFCC, Industry, HIMCOSTE etc. As on date, 10 patents are granted to the department. The department is having active Students Exchange Program with University of Nebraska at Omaha and South Dakota Mines – An engineering, science and technology University, SD, USA. The department is having active research collaborations with reputed national and International Institutes.

[For more information about Department click here](#)

Civil Engineering

The department has got highly qualified, experienced and dynamic faculty with brilliant academic record who have graduated with PG/PhDs from premier institutions like IITs, NITs, and foreign universities including University of Michigan. Faculty members have published a large number of research papers in peer-reviewed/indexed journals. Some faculty members are guiding/have guided PhDs in collaboration with other institutes like IIT Roorkee and PTU Jalandhar, etc. The Department offers research specializations in diversified Civil Engineering fields such as Structural Engineering, Highway and Transportation Engineering, Geotechnical Engineering, Hydraulics Engineering, Environmental & Water Resources Engineering,

Hydropower, and Surveying. A research programme on flow of water around hydraulic structures such as bridge piers and abutments is supported by Department of Science and Technology. Process to fetch support for more research projects from external agencies is underway. Apart from well equipped laboratories and a 10-m long open channel flume for conducting experiments, in order to support computational needs in research work the department has got a number of software tools such as ANSYS, SAP2000, ETABS, STAAD.pro, Geo-5, MX Roads, Primavera, an exclusive CAD lab with 30 PCs and a Workstation computer loaded with Intel Xeon E5 processor, 64 GB RAM, 2 TB HDD with 256 SSD and NvidiaQuadro K4000 graphics card.

[For more information about Department click here](#)

Computer Science & Engineering

The Department has an active Ph D program conducted with supervision by 22 Faculty Members with Ph D from reputed institutions. The Department has awarded 41 doctoral students; and 19 scholars are pursuing Ph D at present The department also has active post graduate programs in M Tech CSE and M Tech CSE(Information Security). The department has more than 723 publications in reputed journals/conferences. The Department offers following research specializations at doctoral level: Parallel and Distributed Computing, Mobile Computing, Cloud Computing, Computer Networks, Wireless Sensor Networks, Forensics, Security, Software Engineering, Image Processing, Computer Vision, Data Mining & Warehousing, Information Retrieval, performance of Algorithms, Artificial Intelligence, Natural Language Processing, Internet of Things (IoT), Information Security, Vehicular Networking. etc. The awarded Ph.D. Scholars of the Department are well placed in leading research laboratories, industries and universities of national and international repute.

[For more information about Department click here](#)

Electronics & Communication Engineering

The Department of Electronics and Communication Engineering (ECE) offers Post-Graduate Programs: M.Tech. in ECE and M.Tech. in ECE with specialization in Internet of Things (IoT), and a Doctoral Programs with major thrust areas of Networked Control Systems design, Cognitive Radio, Wireless Sensor Networks, Digital Image Processing, Digital Signal Processing, Genomics Signal processing, Radar Signal Processing, VLSI Signal Processing, Signal processing for machine learning and deep learning, Industrial Internet of Things, Internet of Medical Things, Cyber-Physical Systems, Smart Antenna design, and Microwave Engineering along with the Undergraduate Programs: B.Tech. in ECE and Electronics and Computer Engineering (ECM). The Department has been actively engaged in research, with a large number of publications in refereed journals and many research projects funded by external agencies like ISRO, DRDO, DST, HIMCOSTE, etc. Faculty members have research collaborations with universities abroad and are engaged in joint research projects. M.Tech. and Ph.D. alumni from our department are currently working as faculty, post-doctoral fellows, and research scholars in IITs and in other reputed universities in India and abroad. Also, our alumni are currently working

on key positions in companies like British Telecom, Microsoft, ONGC, Mitsubishi, Dell, Siemens, Mathworks, Ericsson, Bosch, Tata Motors, Tech Mahindra, Infosys, Amazon, Wipro, PicsArt, and Cognizant etc. Department organizes an IEEE international conference once in every two years. Other activities like workshops, seminars, hackathons, and expert talks are also organized by the department regularly..

[For more information about Department click here](#)

Humanities & Social Sciences

The Department of Humanities and Social Sciences strives to nurture young minds to become well-rounded engineers, responsible global citizens and leaders. The Department acts as a change-facilitator by imparting professional and behavioral competencies to complement the existing and emerging educational programs of the University. We have multifaceted faculty in the Department who offer a variety of contemporary courses to students at undergraduate and post-graduate level. Additionally, the faculty has been conducting FDP programs, community development programs and workshops based on research methods. Research is an important component not only for academic excellence but also for creation of new knowledge. The PhD degree is designed to impart competitive edge in the candidates so that they can fulfill their professional goals in the area of their choice like teaching, consulting, research or any other. Faculty in the Department has been actively pursuing and guiding research in the different areas of Management, Humanities and Social Sciences like Marketing Management, Finance, Economics and International Business, Human Resource Management, Business Communication, Political Science, Good Governance etc. with research publications in journals of high repute. Research specializations include Consumer Behavior, Service Marketing, Internet Marketing, Corporate Social Responsibility, Emotional Intelligence, Good Governance, English Language and Literature, Conflict Management, Corporate Finance, Financial Econometrics, Personal Finance, International Business, Behavioral Finance, Economic Development and Financial & Management Accounting.

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Mathematics

The Department mainly caters to the needs of various Undergraduate (B.Tech) and Post Graduate (M.Tech/MSc) programs of the University by offering requisite mathematics courses, including both core and electives. The Department of Mathematics also offers its own Ph.D Program with specialization in the areas of Mathematical Modeling and Simulation, Operations Research, Differential Geometry, Soft Computing Techniques, Nonlinear Partial Differential Equations, Fuzzy Mathematics, Algebraic Coding Theory, Boundary Value Problems

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Physics & Materials Science

The award of the Ph.D. degree is in recognition of high academic achievements demonstrated by independent research and application of knowledge to the solution of technical and scientific problems. Creative and productive inquiry is the basic requirement underlying research work. The Department has strong research interests in microwave antennas, compound semiconductors, and nano materials. The department has 08 faculty members with diverse research experiences in Nanotechnology, Polymers, Sensors, Quantum dots, Compound Semiconductors etc. The faculty of the Department has executed sponsored R & D projects worth approximately one crore of external research support from various funding agencies like CSIR, ISRO, DST(SERB), DRDO etc. The academic program leading to the Ph.D. degree involves fulfilling course credit, publication and conference presentation of research work and a thesis giving a critical account of the research carried out, in any of the areas listed below. Nano Structured Materials, Micro-strip antennas, Polymer and Composites, Compound Semiconductors, Ferrites, Quantum dots, Glasses, and Sensors.

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