

**JAYPEE UNIVERSITY of INFORMATION TECHNOLOGY, WAKNAGHAT**  
**DOCTORAL PROGRAMS (Ph.D.) 2020**

The 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 Biotechnology & Bioinformatics program of the University has been ranked at No 1 among all private institutions in the country for three years by the Biospectrum and the Association of Biotech Lead Enterprises (ABLE).The Department has 20 labs equipped with major equipment, LC-MS, Q-TOF, 2-D Electrophoresis, genome sequencer, atomic absorption spectrophotometer, bioreactors, animal and plant cell cultures labs, pulsed field electrophoresis, gene pulsar, gene gun, LP system, preparative HPLC, GC-MS, fluorescent microscope, high end servers and workstations. Our R&D infrastructure has been strengthened through external funding worth Rs. 22.0 crores from different Ministries of the Govt. of India, including prestigious DBT programme support under Centers of Excellence & Innovation in Biotechnology, DBT-RGYI, DST-FIST, DST Indo-Russian, etc. in addition to DRDO, MoEF, and ICMR. PhD scholars are provided opportunity to take up research in diverse areas such as metabolic engineering of microbial and plant systems, bioprocess engineering, molecular biology of infectious diseases, industrial enzymes and protein engineering; plant cell culture technologies, bioremediation, biofuels, food technology & probiotics, biosynthetic pathway discovery and gene function, genomic, proteomic and metabolomic technologies, medical informatics, protein modeling, computational genomics, metabolic networks, systems biology, etc.

**[For more information about department click here](#)**

**Civil Engineering**

The department has got highly qualified, experienced and dynamic faculty with brilliant academic records 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 21 Faculty Members with Ph D from reputed institutions. The Department has awarded 30 doctoral students; and 33 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: Ubiquitous Computing, Algorithms and Parallel Computing, Computational and Machine Intelligence, Computer Systems and Networks, Databases and Distributed Systems, Software Engineering and Information Systems, Systems and Network Security, Machine Learning, Computer Vision 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 Doctoral Programme involves course work and intensive thesis work in the area of Electronics and Communication Engineering. The Department is actively involved in research work. The Department has graduated more than 21 doctoral students; many post graduate and graduate students. The department has funded research projects from various govt. agencies like DRDO, ISRO, DST, etc and more than 550 publications in reputed journals/conferences. Research specializations include, RF and Antenna Design, Signal Processing, Image Processing, VLSI Design, Embedded System Design, Mobile & Wireless Communication, Biomedical Signal and Image Processing, Intelligent Control Systems, Communication systems and Networks.

[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. Faculty in the Department has been actively pursuing and guiding research in the areas of Marketing Management, Finance and Economics, Business Communication and Human Resource Management 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 Literature, Conflict Management, Corporate Finance, Financial Econometrics, Personal Finance, International Business, Behavioral Finance, Economic Development and Financial & Management Accounting.

[\*\*For more information about department click here\*\*](#)

## **Mathematics**

The department has an active doctoral programme. PhD programme in Maths provides wide range of specialization in Differential Equations, Mathematical Modelling and Simulation, Optimization Techniques, Fuzzy Statistics, Fuzzy Information Theory, Decision Making, Geometry of Submanifolds, Algebraic Coding Theory. The Department has awarded 8 Ph Ds and 5 scholars are pursuing their Ph D at present.

[\*\*For more information about department click here\*\*](#)

## **Physics & Materials Science**

The Department has strong research interests in semiconductors, polymers, nanomaterials and microwave antenna. Department has eight well equipped laboratories including six laboratories exclusively dedicated for research only. The department has research projects from various Government agencies like DST, SERB, HIMCOSTE, CSIR, DRDO etc. Also the department is well connected with national and international laboratories/universities by collaborated work and MoU's. Faculty has published more than 400 research publications in journals of high repute with more than 4500 citations and maximum h-index 18. Moreover, 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\*\*](#)