

Ph. D. (8-credits required)

Course ID	Course name	Credits	Faculty incharge	Remarks
IT765	Computational Biophysics	3	Kavita Arora	
IT766	Genomics: Concepts, Methods and Applications	3	Mukesh Jain	
IT771	Information Theory and Molecular Biology	3	A Krishnamachari	
IT773	Biomolecular Simulation Theory and the Modeling for Systems	3	Pradipta Bandyopadhyay	
IT776	Digraph and Petri Nets: Theory and the Modeling for Systems	3	Gajendra Pratap Singh	
IT777	Electromagnetics: Applications in Biology	3	Binod Kanaujia	
IT762	Chemoinformatics in Drug Discovery	3	Naidu Subbarao	
IT779	Advanced Applied and Computational Complex Analysis	3	Sapna Shah	
IT-422	Research Methodology	3	Mukesh Jain	Compulsory
IT-718	Reading course	2	Individual supervisors	Compulsory
Biomolecular interactions: techniques and applications	Biomolecular interactions: techniques and applications	3	Kavita Arora	

M.Sc. I year

Course ID	Course name	Credits	CS track	CB track	Faculty Incharge	Remarks
IT401	Mathematics-I	3	Compulsory	Compulsory	Sapna Shah	
IT402	Introduction to probability and statistics	3	Compulsory	Compulsory	Gajendra Pratap Singh	
IT403	Programing fundamentals and data structure	3	Compulsory	Compulsory	Shandar Ahmad/ Guest faculty	Non-credit for B.Sc./B.Tech information technology
IT404	Fundamentals of Physical Sciences	3	Compulsory	Compulsory	Binod Kanaujia/ Brojen Singh/ Pradipta Bandyopadhyay	Non-credit for B.Sc./B.Tech Physical Sciences
IT405	Fundamentals of Biological Sciences	3	Compulsory	Compulsory	Rita Sharma	Non-credit for B.Sc./B.Tech Life Sciences/Biotechnology
IT601N	Programing in R and Python	3	Compulsory	Compulsory	Arnab Bhattacharjee/ Guest faculty	
IT463	Laboratory	2	Compulsory	Compulsory	Faculty panel (TBA)	

PG Diploma in Big Data

Course ID	Course name	Credits	Semeseter	Elective/ Compulsory	
IT601N	Programing in R and Python	3	Semeseter-I	Compulsory	
IT602	Data Analytics and Modeling	3	Semeseter-I	Compulsory	
IT603	Data Warehousing and Integration	3	Semeseter-I	Compulsory	
IT604	Molecular Modeling and Simulation	3	Semeseter-I	Elective	Choose 2 electives
IT605	Genomic Data Analytics	3	Semeseter-I	Elective	Choose 2 electives
IT606	Social Networks and Epidemiology	3	Semeseter-I	Elective	Choose 2 electives
IT607	Personalized Medicine, Health and Clinical Trials	3	Semeseter-I	Elective	Choose 2 electives
IT773	Biomolecular Simulation Theory and the Modeling for Systems				