M.Sc. (BIOINFORMATICS)

COURSE PATTERN AND SCHEME OF EXAMINATION

Course Code	Title of the Course	Instructions Hours/week	Duration of Exam (Hrs)	Marks			Credits
				IA	Semester End Exam	Total	
Semester - I							
IT3GPHC500	Bioinformatics Foundations: From Molecules to Systems	4	2 ½	40	60	100	4
IT3GPHC501	Algorithms in Computational Biology	4	2 ½	40	60	100	4
IT3GPHC502	Basic Biochemistry and Immunology	4	2 ½	40	60	100	4
IT3GPHC503	Cell and Molecular Biology	4	2 ½	40	60	100	4
IT3GPHP500	Bioinformatics & Computational Biology Lab	6	6 (3+3)	40	60	100	3
IT3GPSC521	Basics of Programming with Python	3	2 ½	40	60	100	3
IT3GPSP521	Programming with Python Lab	6	6 (3+3)	40	60	100	3
							25
Semester – II							
IT3GPHC550	Structural Proteomics and Biomarkers	4	2 ½	40	60	100	4
IT3GPHC551	Computational and Translational Immunology	4	2 ½	40	60	100	4
IT3GPHP550	Structural Proteomics and Computational Immunology Lab	6	6 (3+3)	40	60	100	3
IT3GPSC571	Statistics for Genomics Applications	3	2 ½	40	60	100	3
IT3GPSC572	Intermediate Python with Bio-Computing	3	2 ½	40	60	100	3
IT3GPSP571	Programming: Intermediate python and biostatistics	6	6 (3+3)	40	60	100	3
IT3GPRM550	Research Methodology & Ethics	1	1			50	1
IT3GPOE589	Bioethics, Biosafety and IPR	2	1 ½	20	30	50	2

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Semester – III							
Course Code	**Title of the Course**	**Instructions Hours/week**	**Duration of Exam (Hrs)**	**Marks**			**Credits**
				IA	**Semester End Exam**	**Total**	
IT3GPHC600	Computational Approaches in Therapeutics and Biosimilar Development	4	2 ½	40	60	100	4
IT3GPHC601	Trends in Immunomics	4	2 ½	40	60	100	4
IT3GPHP600	Laboratory based on Therapeutics and Immunomics	6	6 (3+3)	40	60	100	3
IT3GPSC621	Data Analytics for Biology	3	2 ½	40	60	100	3
IT3GPSC622	Python Applications in Bioinformatics	3	2 ½	40	60	100	3
IT3GPSP621	Lab based on Python and Machine Learning	6	6 (3+3)	40	60	100	3
IT3GPOE639	Genetic Counselling	2	1 ½	20	30	50	2
IT3GPPR636	Research Project		2			50	2
							24
Semester – IV							
IT3GPPR686a	Project Interim Evaluation & Learning Review				100	100	4
IT3GPPR686b	Project Execution & Defense				100	100	4
IT3GPPR686c	Project Report & Documentation				150	150	6
IT3GPPR687	Domain Knowledge Project			50	100	150	6
							20