M.Sci. Bioinformatics and MS Immunology

Study Plan for Dual Degree

UA Admission Term: Spring 2025 and Beyond

Note: A "B" grade is required for courses applied to U of A's MS Immunology.

Semester One		Units	Grade Req
Amrita	**BIF410:** Introduction to Bioinformatics	3	
	BIO400: Cell Biology & Stem Cell Biology	3	B
	BIO425: Molecular Biology for Bioinformatics	3	
	BIF490: Data Engineering and Administration	3	
	BIF491: Programming Language Concepts	3	
	BIF492: Applied Mathematics for Bioinformatics	3	
	BIO404: Ethics in Research & Intellectual Property Rights	1	
	BIF486: Bioinformatics Tools-Lab	1	
	BIF493: Data Engineering and Administration - Lab	1	
	BIF487: Programming for Bioinformatics - Lab	1	
	22AVP103: Mastery Over Mind	2	
	Total Units	24	

Semester Two		Units	Grade Req
Amrita	**BIF409:** Structural Bioinformatics	3	
	BIF417: Molecular Sequence Analysis	2	
	BIF420: Python for Bioinformatics	3	
	BIF421: R for Bioinformatics	2	
	BIF422: Biological Data Sciences and Machine Learning	3	
	BIF497: Biostatistics and Research Methodology	2	
	BIF424: Python for Bioinformatics - Lab	1	
	BIO 464: Cancer Biology (Elective 1)	3	B
	BIF425: R for Bioinformatics - Lab	1	
U of A	**IMB 506:** Human Immunology	3	B
	IMB 502: Medical Microbiology Basics	1	B
	IMB 504: Medical Virology Basics	1	B
	Total Units	25	

Semester Three		Units	Grade Req
Amrita	**BIO513:** Evolution and Comparative Genomics	3	B
	22BIF501: Bioinformatics of High Throughput Analyses	3	
	22BIF502: Web Programming using Object Oriented Languages	3	
	BIF515: Computer-Aided Drug Design and Pharmacoinformatics	3	
	BIF563: Next-Generation Sequencing Analysis	3	
	22BIF503: Bioinformatics of High Throughput Analyses - Lab	1	
	22BIF504: Web Programming using Object Oriented Languages - Lab	1	
U of A	**IMB 501:** Medical Microbiology and Immunology	4	B
	MIC 528R: Microbial Genetics	3	B
	Total Units	24	

Semester Four		Units	Grade Req
Amrita	**BIO 559:** Thesis	10	B
U of A	**IMB 580:** Human Medical Virology	3	B
	Total Units	13	