

Curriculum

Semester 1			
Sl No.	Course code	Course Name	Credits
1	BIF402	Data Engineering and Administration	3
2	BIF410	Introduction to Bioinformatics	3
3	BIF491	Programming Language Concepts	3
4	BIF492	Applied Mathematics for Bioinformatics	3
5	BIO425	Molecular Biology for Bioinformatics	3
6	BIO400	Cell Biology & Stem Cell Biology	3
7	BIO404	Ethics in Research & Intellectual Property Rights	1
8	CUL401	Cultural Education	1
9	SSD401	Soft Skills	1
10	BIF486	Bioinformatics Tools – Lab	1
11	BIF487	Programming for Bioinformatics – Lab	1
12	BIF492	Data Engineering and Administration – Lab	1

Semester 2			
Sl No.	Course code	Course Name	Credits
1	AVP401	Amrita Value Programme	1
2	BIF401	Energy and Interaction in Biological Modeling	3
3	BIF409	Structural Bioinformatics	3
4	BIF417	Molecular Sequence Analysis	2
5	BIF420	Python for Bioinformatics	3
6	BIO421	R for Bioinformatics	2
7	BIF422	Biological Data Science and Machine Learning	3
8	BIF423	Basics of Biology – Lab	1
9	BIF424	Python for Bioinformatics – Lab	1
10	BIF425	R for Bioinformatics – Lab	1
11	BIF497	Biostatistics and Research Methodology	2
12	SSD402	Soft Skill II	2
13	BIO406	Chemistry of Biomolecules	3

Semester 3			
SI No.	Course code	Course Name	Credits
1	22BIF501	Bioinformatics of High Throughput Analyses	3
2	22BIF502	Web Programming using Object Oriented Languages	3
3	22BIF503	Bioinformatics of High Throughput Analyses - Lab	1
4	22BIF504	Web Programming using Object Oriented Languages - Lab	1
5	BIF513	Evolution and Comparative Genomics	3
6	BIF515	Computer Aided Drug Design & Pharmacoinformatics	3
7	BIF518	Mathematical Modeling of Biological Systems	2
8	BIF551	Systems Biology	2
9	BIF561	Computational Neuroscience	3
10	BIF563	Next-Generation Sequencing Analysis	3
11	BIO527	Mass Spectrometry & Proteomics	3

Semester 4			
SI No.	Course code	Course Name	Credits
1	BIF 599	Dissertation/Thesis	10
1	15OEL641	Glimpses of Life through literature	2
2	15OEL648	Object Oriented Programming (Python)	2
3	16OEL664	Bhagavad-Gita & Personality Development	2
4	BIO527	Mass Spectrometry & Proteomics	3
5	BIF561	Computational Neuroscience	3
16	BIO464	Cancer Biology	3

ELECTIVE			
SI No.	Course code	Course Name	Credits
1		Metagenomics And Microbiome	3
2		Neurobiology and Electrophysiology	3
3		Computational Neuroscience	3
5		Molecular & Cellular Biophysics	3
6		Bioinformatics And Bigdata	3
7		Mass Spectrometry & Proteomics	3
8		Immunological Bioinformatics	3
9		Clinical Data Management	3