2025 MSB - M.Sc., Biotechnology

	Category Credit Detail		
Sl.No.	Description	Credits	Maximum Credit
1	DC - Discipline Core	28	28
2	DE - Discipline Elective	21	21
3	PI - Projects and Internship	20	20
4	OE - Open Elective	6	6
5	SE - Skill Enhancement	5	5
	Total Credits	80	

			Discipline Core						
sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	PBIT501L	Microbiology	Theory Only	1.0	3	0	0	0	3.0
2	PBIT501P	Microbiology Lab	Lab Only	1.0	0	0	2	0	1.0
3	PBIT502L	Advanced Biochemistry	Theory Only	1.0	3	0	0	0	3.0
4	PBIT502P	Advanced Biochemistry Lab	Lab Only	1.0	0	0	2	0	1.0
5	PBIT503L	Cell and Molecular Biology	Theory Only	1.0	3	0	0	0	3.0
6	PBIT503P	Cell and Molecular Biology Lab	Lab Only	1.0	0	0	2	0	1.0
7	PBIT504L	Immunology	Theory Only	1.0	3	0	0	0	3.0
8	PBIT505L	Analytical Techniques in Biotechnology	Theory Only	1.0	2	0	0	0	2.0
9	PBIT505P	Analytical Techniques in Biotechnology Lab	Lab Only	1.0	0	0	2	0	1.0
10	PBIT506L	Bioinformatics	Theory Only	1.0	2	0	0	0	2.0
11	PBIT506P	Bioinformatics Lab	Lab Only	1.0	0	0	2	0	1.0
12	PBIT507L	Biostatistics and Research Methodology	Theory Only	1.0	3	0	0	0	3.0
13	PBMG508L	Genetic Engineering	Theory Only	1.0	3	0	0	0	3.0
14	PBMG508P	Genetic Engineering Lab	Lab Only	1.0	0	0	2	0	1.0

			Discipline Elective						
sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	PBIT601L	Medical Diagnostics	Theory Only	1.0	3	0	0	0	3.0
2	PBIT602L	Tissue Engineering and Regenerative Medicine	Theory Only	1.0	3	0	0	0	3.0
3	PBIT603L	Medical Biotechnology	Theory Only	1.0	3	0	0	0	3.0
4	PBIT604L	Industrial Biotechnology	Theory Only	1.0	3	0	0	0	3.0
5	PBIT605L	Cancer Biology and Therapeutics	Theory Only	1.0	3	0	0	0	3.0
6	PBIT606L	Stem Cell Biology	Theory Only	1.0	3	0	0	0	3.0
7	PBIT607L	Clinical and Translational Research	Theory Only	1.0	3	0	0	0	3.0
8	PBIT608L	Forensic Science and Technology	Theory Only	1.0	3	0	0	0	3.0
9	PBIT609L	Pharmacology and Toxicology	Theory Only	1.0	3	0	0	0	3.0
10	PBIT610L	Medical Informatics	Theory Only	1.0	3	0	0	0	3.0
11	PBIT611L	Nutraceuticals	Theory Only	1.0	3	0	0	0	3.0

		Discipline Elective							
12	PBIT612L	Marine Biotechnology	Theory Only	1.0	3	0	0	0	3.0
13	PBIT613L	Nanobiotechnology	Theory Only	1.0	3	0	0	0	3.0
14	PBIT614L	Applied Enzyme Technology	Theory Only	1.0	3	0	0	0	3.0
15	PBIT615L	Metabolic Engineering	Theory Only	1.0	3	0	0	0	3.0
16	PBIT616L	Plant Biotechnology	Theory Only	1.0	3	0	0	0	3.0
17	PBIT617L	Bioremediation	Theory Only	1.0	3	0	0	0	3.0
18	PBIT618L	Genomics and Proteomics	Theory Only	1.0	3	0	0	0	3.0
19	PBIT619L	Signal Transduction	Theory Only	1.0	3	0	0	0	3.0
20	PBIT620L	Cellular and Molecular Biophysics	Theory Only	1.0	3	0	0	0	3.0
21	PBIT621L	Programming Tools and Methodology	Theory Only	1.0	3	0	0	0	3.0
22	PBIT622L	Advanced Bioinformatics	Theory Only	1.0	3	0	0	0	3.0
23	PBIT623L	Global Health Issues - Human and Social Science Approach	Theory Only	1.0	1	0	0	0	1.0
24	PBIT624L	Data Mining	Theory Only	1.0	3	0	0	0	3.0
25	PBIT625E	Computer Vision and Medical Imaging	Embedded Theory and Lab	1.0	2	0	2	0	3.0
26	PBIT626E	Advanced Python for Machine Learning	Embedded Theory and Lab	1.0	2	0	2	0	3.0
27	PBIT627L	Deep Learning and Applications	Theory Only	1.0	3	0	0	0	3.0
28	PBIT628L	Biomedical Image Analysis	Theory Only	1.0	2	0	0	0	2.0
29	PBIT629L	Drug Discovery from Natural Sources	Theory Only	1.0	3	0	0	0	3.0
30	PBIT630L	Biomedical Biotechnology	Theory Only	1.0	3	0	0	0	3.0
31	PBIT631L	Molecular Pharmacology and Pharmacokinetics	Theory Only	1.0	2	0	0	0	2.0
32	PBIT632L	Practical Formulation and Biopharmacy	Theory Only	1.0	3	0	0	0	3.0
33	PBIT633L	Antiviral Strategies	Theory Only	1.0	2	0	0	0	2.0
34	PBIT634E	Molecular Modelling	Embedded Theory and Lab	1.0	2	0	2	0	3.0
35	PBIT635L	Molecular Markers and Selection	Theory Only	1.0	2	0	0	0	2.0
36	PBIT636L	Therapeutic Approaches - Use of Resources from Plant Biodiversity	Theory Only	1.0	2	0	0	0	2.0
37	PBIT637J	Seminar Cycle - I	Project	1.0	0	0	0	0	2.0
38	PBIT638J	Seminar Cycle - II	Project	1.0	0	0	0	0	2.0

		Projects and Internship							
sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	PBIT698J	Internship I/ Dissertation I	Project	1.0	0	0	0	0	4.0
2	PBIT699J	Internship II/ Dissertation II	Project	1.0	0	0	0	0	12.0
3	PSET695J	Project Work	Project	1.0	0	0	0	0	4.0

Open Elective

sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	CFOC102M	Introduction to Cognitive Psychology	Online Course	1.0	0	0	0	0	3.0
2	CFOC176M	Computer Aided Drug Design	Online Course	1.0	0	0	0	0	2.0
3	CFOC181M	WildLife Conservation	Online Course	1.0	0	0	0	0	2.0
4	CFOC191M	Forests and their Management	Online Course	1.0	0	0	0	0	3.0
5	CFOC193M	Bioengineering: An Interface with Biology and Medicine	Online Course	1.0	0	0	0	0	2.0
6	CFOC194M	Human Molecular Genetics	Online Course	1.0	0	0	0	0	1.0
7	CFOC197M	Bio-Informatics: Algorithms and Applications	Online Course	1.0	0	0	0	0	3.0
8	CFOC222M	Artificial Intelligence : Knowledge Representation And Reasoning	Online Course	1.0	0	0	0	0	3.0
9	CFOC240M	Interactomics : Basics and Applications	Online Course	1.0	0	0	0	0	3.0
10	CFOC255M	Applied Environmental Microbiology	Online Course	1.0	0	0	0	0	3.0
11	CFOC308M	The Joy of Computing using Python	Online Course	1.0	0	0	0	0	3.0
12	CFOC384M	Entrepreneurship Essentials	Online Course	1.0	0	0	0	0	3.0
13	CFOC397M	Intellectual Property	Online Course	1.0	0	0	0	0	3.0
14	CFOC398M	English Language for Competitive Exams	Online Course	1.0	0	0	0	0	3.0
15	CFOC408M	English Literature of the Romantic Period, 1798 - 1832	Online Course	1.0	0	0	0	0	2.0
16	CFOC415M	German - I	Online Course	1.0	0	0	0	0	3.0
17	CFOC575M	Wildlife Ecology	Online Course	1.0	0	0	0	0	3.0
18	CFOC650M	Human Physiology	Online Course	1.0	0	0	0	0	3.0
19	CFOC651M	Psychology of Stress, Health and Well-being	Online Course	1.0	0	0	0	0	3.0
20	CFOC676M	Environmental Geosciences	Online Course	1.0	0	0	0	0	3.0
21	CFOC677M	Food Science and Technology	Online Course	1.0	0	0	0	0	3.0
22	CFOC679M	Basics of Crop Breeding and Plant Biotechnology	Online Course	1.0	0	0	0	0	3.0
23	CFOC680M	Psychology of Personality and Individual Differences: Theory and Applications	Online Course	1.0	0	0	0	0	3.0
24	CFOC681M	Computational Genomics	Online Course	1.0	0	0	0	0	3.0
25	CFOC682M	Classics in Neuroscience	Online Course	1.0	0	0	0	0	3.0
26	CFOC683M	Bioreactor Design and Analysis	Online Course	1.0	0	0	0	0	2.0
27	CFOC685M	Comprehensive Molecular Diagnostics and Advanced Gene Expression Analysis	Online Course	1.0	0	0	0	0	3.0
28	CFOC701M	Child Development	Online Course	1.0	0	0	0	0	3.0
29	PBMG604L	Reproductive Genetics	Theory Only	1.0	3	0	0	0	3.0

Skill Enhancement

sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	PENG501P	Technical Report Writing	Lab Only	1.0	0	0	4	0	2.0
2	PSTS501P	Qualitative Skills Practice	Soft Skill	1.0	0	0	3	0	1.5

			Skill Enhancement						
3	PSTS502P	Quantitative Skills Practice	Soft Skill	1.0	0	0	3	0	1.5