

DEPARTMENT OF BIOTECHNOLOGY

M.Sc. (Biotechnology)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1st YEAR					Semester- I (Autumn)									
1.	BT-501	Biochemistry	PCC	3	3	-	-	3	-	20-30	-	20-30	40-50	-
2.	BT-502	Cell and Molecular Biology	PCC	3	3	-	-	3	-	20-30	-	20-30	40-50	-
3.	BT-503	Plant and Animal Biotechnology	PCC	3	3	-	-	3	-	20-30	-	20-30	40-50	-
4.	BT-504	Microbiology	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
5.	BT-505	Genetics	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
6.	BT-506	Basics of Mathematics and Statistics	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
7.	BT-507	Basics of Chemistry and Physics	PCC	2	1.5	0.5	-	2	-	20-30	-	20-30	40-50	-
8.	BT-508	Laboratory I: Biochemistry & Analytical Techniques	PCC	3	-	-	6	-	-	-	100	-	-	-
9.	BT-509	Laboratory II: Microbiology	PCC	2	-	-	4	-	-	-	100	-	-	-
10.	BT-510	Laboratory III: Plant and Animal Biotechnology	PCC	2	-	-	4	-	-	-	100	-	-	-
		Total		24										
Semester-II (Spring)														
1.	BT-511	Genetic Engineering	PCC	3	3	-	-	3	-	20-30	-	20-30	40-50	-
2.	BT-512	Immunology	PCC	3	3	-	-	3	-	20-30	-	20-30	40-50	-
3.	BT-513	Bioinformatics	PCC	3	2	1	-	3	-	20-30	-	20-30	40-50	-
4.	BT-514	Genomics and Proteomics	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
5.	BT-515	Molecular Diagnostics	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
6.	BT-516	Research methodology and Scientific communication skill	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
7.	BT-517	Laboratory IV: Molecular Biology and Genetic Engineering	PCC	3	-	-	6	-	-	-	100	-	-	-
8.	BT-518	Laboratory V: Immunology	PCC	3	-	-	6	-	-	-	100	-	-	-
9.	BT-519	Seminar	PCC	1	-	1	-	1	-	-	-	-	100	-
10.		Programme Elective –I	PEC	2	-	-	-	-	-	-	-	-	-	-
		Total		24										
2nd YEAR					Semester- I (Autumn)									
1.	BT-601	Bioprocess Engineering & Technology	PCC	3	3	-	-	3	-	20-30	-	20-30	40-50	-

2.	BT-602	Emerging Technologies	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
3.	BT-603	Critical Analysis of Classical Papers	PCC	2	-	2	-	2	-	-	-	-	100	-
4.	BT-604	Bio-entrepreneurship	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
5.	BT-605	Intellectual Property Rights, Biosafety and Bioethics	PCC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
6.	BT-606	Project Proposal Preparation & Presentation	PCC	2	1	1	-	-	-	20-30	-	20-30	40-50	-
7.	BT-607	Laboratory VI: Bioprocess Engineering & Technology	PCC	4	-	-	8	-	-	-	100	-	-	-
8.	BT-608	Laboratory VII: Bioinformatics	PCC	2	-	-	4	-	-	-	100	-	-	-
9.	BT-609	Dissertation-Minor	PCC	4	-	-	4	-	-	-	100	-	-	-
10.	BT-610	Seminar	PCC	1	-	01	-	1	-	-	-	-	100	-
		Total		24										
Semester-II (Spring)														
1.	BT-611	Dissertation-Major	PCC	20	-	-	40	-			100			
2.		Programme Elective –II	PEC	2	-	-	-	-	-	-	-	-	-	-
		Total		22										
		Total Credits		94										

Program Elective Courses M.Sc. (Biotechnology)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
		Programme Elective-I												
1.	BT-520	Biological Imaging	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
2.	BT-521	Microbial Technology	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
3.	BT-522	Environmental Biotechnology	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
4.	BT-523	Drug Discovery and Development	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
5.	BT-524	Structural Biology	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
6.	BT-525	Biophysical Techniques	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
		Programme Elective-II												
7.	BT-612	Computational Biology	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
8.	BT-613	Nano-Biotechnology	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-

9.	BT-614	Protein Engineering	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
10.	BT-615	Advance cell culture technologies	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-
11.	BT-616	Vaccines	PEC	2	2	-	-	2	-	20-30	-	20-30	40-50	-