



JOY UNIVERSITY
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School of Health and Life Sciences

Department of Biotechnology

B.Sc Biotechnology – I Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BSBT 1111	Cell Biology & Genetics	3	0	4	7	5
2.	BSBT 1112	Biochemistry	3	0	4	7	5
3.	BSBT 1113	Biotechnology for Human Welfare	3	0	0	3	3
4.	BSBT2111	Computer applications	0	0	4	4	2
5.	AEEN1111	Communicative skills in English	3	0	0	3	3
		TOTAL	12	0	12	24	18

B.Sc Biotechnology – II Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BSBT 1121	Basic Microbiology	3	0	4	7	5
2.	BSBT 1122	Molecular Biology	3	0	4	7	5
3.	BSBT 1123	Bioanalytical techniques	3	0	0	3	3
4.	AEEV 1121	Environmental Science	2	0	0	2	2
5.	BSBT 1124	Biophysics	3	0	0	3	3
6.	GE	Generic Elective I	3	0	0	3	3
		TOTAL	17	0	8	25	21

B.Sc Biotechnology – III Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BSBT 1211	Immunology	3	0	0	3	3
2.	BSBT 1212	rDNA technology	3	0	4	7	5
3.	BSBT 1213	Renewable energy and Green Technology	3	0	0	3	3
4.	BSBT 1214	Biofertilizers and Biopesticides	3	0	0	3	3
5.	BSBT 1215	Environmental Biotechnology	3	0	0	3	3
6.	GE	Generic Elective II	3	0	0	3	3
		TOTAL	18	0	4	22	20

B.Sc Biotechnology – IV Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BSBT 1221	Bioethics and IPR	3	0	0	3	3
2.	BSBT 1222	Plant biotechnology	3	0	4	7	5
3.	BSBT 1223	Animal Biotechnology	3	0	4	7	5
4.	BSBT 1224	Agricultural Biotechnology	3	0	4	7	5
5.	BSBT 1225	Medical and pharmaceutical Biotechnology	3	0	0	3	3
		TOTAL	15	0	12	27	21

B.Sc Biotechnology – V Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BSBT 1311	Bioprocess technology	4	0	0	4	4
2.	BSBT 1312	Bioinformatics	3	0	4	7	5
3.	BSBT 1313	Enzyme technology	4	0	0	4	4
4.	PEBT131#	PSE I	3	0	0	3	3

5.	PEBT131#	PSE II	3	0	0	3	3
6.	BSBT3311	Project I	#	#	#	#	3
7.	BSBT6311	SEMINAR	#	#	#	#	6
		TOTAL	17	0	4	21	28

Program Specific Elective I

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	PEBT1311	Nano biotechnology	3	0	0	3	3
2.	PEBT1312	Molecular Diagnostics	3	0	0	3	3

Program Specific Elective II:

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	PEBT1313	Industrial fermentation	3	0	0	3	3
2.	PEBT1314	Drug designing	3	0	0	3	3

B.Sc Biotechnology – VI Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BSBT 1321	Food Biotechnology	3	0	0	3	3
2.	BSBT 1322	Genomics and proteomics	3	0	0	3	3
3.	BSBT 1323	Industrial Biotechnology	3	0	0	3	3
4.	BTBT1324	Principles of Management (Entrepreneurship and start-ups)	3	0	0	3	3
5.	PEBT132#	PSE III	3	0	0	3	3
6.	PEBT132#	PSE IV	3	0	0	3	3
7.	BSBT 3321	Project II	#	#	#	#	3

8.	BSBT 6321	SEMINAR	#	#	#	#	6	
			TOTAL	18	0	0	18	27

Program Specific Elective III

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	PEBT1321	Stem cell technology	3	0	0	3	3
2.	PEBT1322	Water quality & management measures	3	0	0	3	3

Program Specific Elective IV

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	PEBT1323	Food quality and control	3	0	0	3	3
2.	PEBT1324	Waste and by-products utilization	3	0	0	3	3

Open electives offered by the department

Sl.No	Course Code	Course Title	Semester	L	T	P	Contact Hrs / Wk	Credits
1.	BSBT1125	Industrial and Microbial Biotechnology	2	3	0	0	3	3
2	BSBT1216	Biomass and Bioenergy	3	3	0	0	3	3
3	BSBT1226	Biotechnology and Biosafety	4	3	0	0	3	3
4	BSBT1314	Plant tissue culture	5	3	0	0	3	3
5	BSBT1325	Molecular genome and cryobiology	6	3	0	0	3	3

Semester-wise Credit Load

Semester	Credits
I	18
II	21
III	20
IV	21
V	28
VI	27
Total	135