

School of Health and Life Sciences

Department of Biotechnology

B. Tech Biotechnology – I Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	AEEN1111	Communication Skills in English	2	0	0	2	2
2.	BTBT1111	Applied Physics for Engineers	3	0	2	5	4
3.	BTBT1112	Mathematics for Engineers I	3	1	0	4	4
4.	BTBT1113	Fundamentals of Computing	3	0	2	5	4
5.	BTBT1114	Introduction to Biochemistry	3	0	2	5	4
6.	BTBT1115	Engineering Drawing	3	0	2	5	4
		TOTAL	15	1	8	24	22

B. Tech Biotechnology – II Semester

Sl. No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTBT1121	Mathematics for Engineers II	3	1	0	4	4
2.	AEEV1121	Environmental Science	3	0	0	3	3
3.	BTBT1122	Foundation of Electronics & Instrumentation Engineering	3	0	2	5	4
4.	BTBT1123	Python Programming	3	0	2	5	4
5.	BTBT1124	Probability, Statistics, and Stochastic Process	3	0	0	3	3
6.	BTBT1125	Computer Hardware Laboratory	0	0	2	2	2
		TOTAL	15	1	4	28	20

B. Tech Biotechnology – III Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTBT1211	Genomics and Proteomics	3	0	0	3	3
2.	BTBT1212	Microbiology	3	0	0	3	3
3.	BTBT1213	Genetics	3	0	0	3	3
4.	BTBT1214	Cell and molecular Biology	3	0	0	3	3
5.	BTBT2211	Genomics and Proteomics Laboratory	0	0	3	3	2
6.	BTBT2212	Microbiology Laboratory	0	0	3	3	2
7.	BTBT2214	Cell and molecular Biology laboratory	0	0	3	3	2
8.	AEPH1213	Professional Ethics	2	0	0	2	2
		TOTAL	14	0	9	23	20

B. Tech Biotechnology – IV Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTBT 1221	Bioprocess Engineering	3	0	0	3	3
2.	BTBT 1222	Environmental Biotechnology	3	0	0	3	3
3.	BTBT 1223	Heat and Mass Transfer	3	0	0	3	3
4.	BTBT 1224	Data structure and Algorithms	3	0	0	3	3
5.	BTBT 1225	rDNA technology and Genetic engineering	3	0	0	3	3
6.	BTBT 1226	Engineering Economics	2	0	0	2	2
7.	BTBT 2221	Heat and Mass Transfer Laboratory	0	0	2	3	2
8.	BTBT 2222	Data structure and Algorithms Practical	0	0	1	2	1
		TOTAL	17	0	3	22	20

B.Tech Biotechnology – V Semester

Sl. No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTBT1311	Principles of Management (Entrepreneurship and start-ups)	2	0	0	2	2
2.	BTBT 1312	Metabolic Engineering	3	0	0	3	3
3.	BTBT 1313	Immunology and Immunotechnology	3	0	0	3	3
4.	BTBT 1314	Database management systems	3	0	0	3	3
5.	BTBT 1315	Bioinformatics and Computational Biology	3	0	0	3	3
6.	BTBT 2311	Database management systems laboratory	0	0	3	3	2
7.	BTBT 2312	Bioinformatics Laboratory	0	0	3	3	2
8.	BTBT 3313	Project I					3
9.	GE	Generic elective I	3	0	0	3	3
10.	PEBT 131#	PSE I	3	0	0	3	3
		TOTAL	20	0	6	26	27

List of Program Specific Electives for V Semester

Sl.no.	Course code	Course Title	L	T	P	Contact hrs/wk	Credits
1.	PEBT1311	Molecular modelling and Drug designing	3	0	0	3	3
2.	PEBT1312	Biosensors and Diagnostics	3	0	0	3	3
3.	PEBT1313	Biofertilizers and Biopesticides	3	0	0	3	3
4.	PEBT1314	Biomaterials	3	0	0	3	3

B.Tech Biotechnology – VI Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1	BTBT 1321	Bioseparation Technology and Downstream processing	3	0	0	3	3
2	BTBT 1322	Synthetic and System Biology	3	0	0	3	3
3	BTBT 1323	Animal Biotechnology	3	0	0	3	3
4	BTBT 2321	Animal Biotechnology Laboratory	0	0	3	3	2
5	PEBT 132#	PSE II	4	0	0	4	4
6	GE	Generic Elective II	3	0	0	3	3
7	BTBT 3321	Project II					3
		TOTAL	16	0	3	19	21

List of Program Specific Electives for VI Semester

Sl.no.	Course code	Course Title	L	T	P	Contact hrs/wk	Credits
1.	PEBT1321	Human Genomics	3	0	0	3	3
2.	PEBT1322	Proteomics	3	0	0	3	3
3.	PEBT1323	Human Genomics	3	0	0	3	3
4.	PEBT1324	Waste management and upcycling	3	0	0	3	3
5.	PEBT1325	Stem-cell technology	3	0	0	3	3

B.Tech Biotechnology – VII Semester

Sl.No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTBT 1411	Bioethics and Intellectual Property Rights	2	0	0	2	2
2.	BTBT 1412	Food Biotechnology	3	0	0	3	3
3.	BTBT 1413	Plant Biotechnology	3	0	0	3	3
4.	BTBT2411	Plant Biotechnology Laboratory	0	0	3	3	2
5.	PEBT 141#	PSE III	3	0	0	3	3
6.	PEBT 141#	PSE IV	3	0	0	3	3
7.	GE	Generic Elective III	3	0	0	3	3
8.	GE	Generic Elective IV	3	0	0	3	3
		TOTAL	20	0	3	23	22

List of Program Specific Elective-III for VII Semester

Sl.no.	Course code	Course Title	L	T	P	Contact hrs/wk	Credits
1.	PEBT1411	Gene expression and transgenics	3	0	0	3	3
2.	PEBT1412	Rational Drug Delivery	3	0	0	3	3

List of Program Specific Elective-IV for VII Semester

Sl.no.	Course code	Course Title	L	T	P	Contact hrs/wk	Credits
1.	PEBT1413	Tissue engineering	3	0	0	3	3
2.	PEBT1414	Nano Biotechnology	3	0	0	3	3

B.Tech Biotechnology – VIII Semester

Sl.No.	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1.	BTBT 1421	Biomaterials	3	0	0	3	3
2.	BTBT 1422	Renewable energy technology	3	0	0	3	3
3.	BTBT 1423	Medicinal and pharmaceutical Biotechnology	3	0	0	3	3
4.	BTBT 3421	Project-II (Biotech Industrial or Biotech In house project or Bio entrepreneurship/Startups)					4
5.	BTBT 6421	Comprehensive Viva Voce/Seminar					6