

Semester-I

Course Code	Course Name	L-T-P			Credits
		L	T	P	
PHY102	Physics-II; Introduction To Engineering Electromagnetics	3	1	2	13
CY101	Chemistry - I	2	1	2	10
MA102	Engineering Mathematics -II	3	1	0	11
ME103	Engineering Thermodynamics	3	1	0	11
ME104	Manufacturing Practice - I	0	0	3	3
ME105	Engineering Drawing	1	0	3	6
	Total	12	4	10	54

Semester-II

Course Code	Course Name	L-T-P			Credits
		L	T	P	
PHY101	Physics- I: Classical, Quantum and Relativistic Mechanics	3	1	2	13
CY103	Essentials of Biochemistry	3	0	2	11
CSO101	Computer Programming	3	1	2	13
BC101	Biochemical Engineering Practice	1	0	3	6
ME106	Manufacturing Practice - II	0	0	3	3
H103	Development of Society	2	1	0	8
H104	History and Civilization #				
	Total	12	3	12	54

Semester-III

Course Code	Course Name	(L-T-P)			Credits
CHO102	Fluid Mechanics	3	1	0	11
EO102	Fundamentals of Electronics and Instrumentation Engineering	3	1	2	13
CHO202	Chemical Reaction Engineering-I	2	1	0	8
BC201	Advances in Biochemistry	3	1	2	13
BC291	Exploratory Project	0	0	5	5
H105	Philosophy	2	1	0	8
H106	Education and Self #				
	Total	13	5	9	58

Semester-IV

Course Code	Course Name	(L-T-P)			Credits
MA201	Numerical Techniques	3	1	0	11
BC211	Microbial Process Principles	2	1	0	8
BC212	Bioprocess Calculations	2	1	0	8
BC221	Fundamentals of Microbiology	3	0	2	11
H102	Universal Human Value –II; Self And Nature	1	1	0	5
	Total	11	4	2	43

Semester-V

Course Code	Course Name	(L-T-P)			Credits
BC311	Microbial Engineering	3	1	0	11
BC323	Enzyme Engineering	3	1	2	13
BC312	Bioprocess Technology	3	0	0	9
DE-1	Department Elective (DE) -1	3	0	2	11
OE-1	Open Elective - 1	3	0	0	9
HU/LM	Humanities/Language and Management Courses ^{^^}	3	0	0	9
	Total	18	2	4	60
BC 391S	Stream Project (Hons.)	0	0	10	10
	Total	17	2	3	70

List of Electives DE - 1

Course Code	Course Name	L-T-P			Credits
BC331	Waste Water Engineering	3	0	2	11
BC325	Biofuels & Bio Energy	3	0	2	11

Semester-VI

Course Code	Course Name	(L-T-P)			Credits
BC314	Bioreactor Design	3	0	2	11
BC301	Bioinstrumentation & Control	3	0	0	9
BC332	Molecular Biology & Genetic Engineering	3	0	2	11
DE-2	Department Elective (DE) - 2	3	0	0	9
OE-2	Open Elective - 2	3	0	0	9
HU/LM	Humanities/Language and Management Courses ^{^^}	3	0	0	9
BC392/BC392S	Stream or UG Project	0	0	10	10
	Total	18	0	14	68

^{^^}Courses to be selected such that recommended HU & LM Programme components get satisfied separately.

List of Electives DE - 2

Course Code	Course Name	L-T-P			Credits
BC315	Fermentation Processes	3	0	0	9
BC333	Structural Biology	3	0	0	9

Semester-VII

Course Code	Course Name	(L-T-P)			Credits
BC401	Downstream Processing	3	0	0	9
DE-3	Department Elective (DE) - 3	3	0	2	11
DE-4	Department Elective (DE) - 4	3	0	0	9
OE-3	Open Elective - 3	3	0	0	9
BC491	UG Project (Non-Hons Students)	0	0	10	10
HU/LM	Humanities/Language and Management Courses [^]	3	0	0	9
	Total (Non-Hons Students)	15	0	12	57
BC491S	Stream Project (Hons Students)	0	0	20	20
	Total (Hons Students)				67

[^]Courses to be selected such that recommended HU & LM Programme components get satisfied separately.

List of Electives DE-3

Course Code	Course Name	L-T-P			Credits
BC402	Food Engineering & Technology	3	0	2	11
Bio Conversion	3	0	2	11	

List of Electives - DE-4

Course Code	Course Name	L-T-P			Credits
BC434	Fundamentals of Bioinformatics	3	0	0	9
BC424	Animal Cell Culture	3	0	0	9
BC416	Advance Bio Reactor Design	3	0	0	9

Semester-VIII

Course Code	Course Name	L-T-P			Credits
BC403	Bioprocess Plant Design	3	0	0	9
DE -5	Department Elective (DE) - 5	3	0	0	9
OE-4	Open Elective - 4	3	0	0	9
BC492	M.Tech.Thesis	0	0	10	10
HU/LM	Humanities/Language and Management Courses ^{^^}	3	0	0	9
	TOTAL	12	0	10	46
Course Code	Course Name	L-T-P			Credits
BC417	Bioprocess simulation	3	0	0	9
BC425	Cell & tissue Engineering	3	0	0	9
BC435	rDNA Technology	3	0	0	9

Semester-IX

Course Code	Course Name	L-T-P			Credits
DE-6	Department Elective (DE) - 6	3	0	0	9
DE-7	Department Elective(DE) - 7	3	0	0	9
OE-5	Open Elective - 5	3	0	0	9
OE-6	Open Elective - 6	3	0	0	9
HU/LM	Humanities/Language and Management Courses ^{^^}	3	0	0	9
BC591	M.Tech.Thesis	0	0	20	20
				Total	65
Course Code	Course Name	L-T-P			Credits
BC501	Bio Business Planning & Management	3	0	0	9

BC502	Regulatory aspects in Bio Technology	3	0	0	9
Course Code	Course Name	L-T-P			Credits
BC536	Protein Engineering	3	0	0	9
BC526	Metabolic Engineering	3	0	0	9
BC516	Biosensor	3	0	0	9

Semester-X

Course Code	Course Name	L-T-P			Credits
BC592	M.Tech.Thesis	0	0	50	50
	Total	0	0	50	50