Chemical and Biochemical Engineering

SEMESTER - I (Common for all B.Tech Courses)

S.No	C. Code	Course	L	T	P	C
1	MA 101	Calculus	3	1.5	0	9
2	PH 101	Quantum Physics and Applications	2	1	0	6
3	PH 113	Hands on Science Laboratory – I	0	0	3	3
4	CS 101	Computer Programming	3	0	3	9
5	HS 106	Design Thinking and Creativity	1	0	0	PP/NP
6	CH101T	Fundamental Concepts & Applications of Chemistry	3	0	0	6
7	BB 103	Introduction to Modern Biology	3	0	0	6
8	NO 105/107	NSO/NSS	0	0	2	2
		Total Credits				**41**

Semester II

S.No	Course Code	Course Name	L	T	P	C
1	MA102	Linear Algebra (1st Half)	3	1.5	0	9
2	ME 111	Engineering Graphics Lab	1	0	3	6
3	ME 113	Hands on Engineering Lab	0	0	3	3
4	CL 101	Introduction to Chemical Engineering	3	0	0	6
5	BB 201	Biomolecules	2	1	0	6
6	CH201T	Organic Chemistry	3	0	0	3
7	NO 105/NO 107	NSO/NSS	0	0	2	2
		Total Credits				39

Semester III

S.No	Course Code	Course Name	L	T	P	C
1	EE205T	Introduction to Probability	3	0	0	3
2	EE207T	Data Analysis	3	0	0	3
3	CL205T	Heat Transfer for Chemical Engineers	3	0	0	6
4	CL203T	Introduction to Chemical Engineering Thermodynamics	3	0	0	6
5	CL204T	Fluid Mechanics and Mechanical Operations	3	0	0	6
6	ME205T	Mechincs of Materials	2	1	0	6
7	BB401T	Basics of Cell Biology and Genetics	3	0	0	6

		Total Credits				36

Semester IV

S.No	Course Code	Course Name	L	T	P	C
1	CL201L	Chemical Engineering lab-I	3	0	0	3
2	CL206T	Materials Science for Chemical Engineers	3	0	0	6
3	MA103T	Differential Equation-I	3	1	0	4
4	BB403T	Biophysics	3	0	0	3
5	CE301T	Environmental Studies	3	0	0	6
6	CL201T	Reaction Engineering	3	0	0	6
7	CH201T	Organic Chemistry	3	0	0	3
8	CL202T	mass Transfer	3	0	0	6
		Total Credits				37

Semester V

S.No	Course Code	Course Name	L	T	P	C
1	CL304T	Applications of Mass Transfer	3	0	0	6
2	CH308T	Advanced Chemical Reaction Engineering	3	0	0	6
3	CH307T	Process Dynamics and Control	3	0	0	6
4	CH302T	Process Equipment Design and Economics	3	0	0	6
5	CH301L	Chemical Engineering Lab II	0	0	3	3
6	HS201T	Economics	3	0	0	6
		Total Credits				33

Semester VI

S.No	Course Code	Course Name	L	T	P	C
1	CL301T	Introduction to Transport Phenomena	3	0	0	6
2	CL301C	Numerical Method in Chemical Engineering	3	0	0	6
4		Program Elective-I	3	0	0	6
5	CL302L	Chemical Engineering lab-III	0	0	3	3
6	CS 209	Artificial Intelligence	3	0	0	6
7	CS 214	Artificial Intelligence Lab	0	0	3	3
		Total Credits				30

Semester VII

S.No	Course Code	Course Name	L	T	P	C

1	CL405T	Bio Process Engineering	3	0	0	6
2	CL401S	Scientific Presentation	0	0	3	3
3		Program Elective-II	3	0	0	6
4		Program Elective-III/BTP-I	3	0	0	6
5		HSS Elective-I	3	0	0	6
		Total Credits				27

Semester VIII

S.No	Course Code	Course Name	L	T	P	C
1		Program Elective-IV	3	0	0	6
2		Program Elective-V/BTP-II	3	0	0	6
3		Institute Elective-I	3	0	0	6
4		HSS Elective-II	3	0	0	6
		Total Credits				24

	Overal Credits Required (Minimum)		268

Program Electives	5			
Institute Electives	1			
HSS Electives	2	268		