Branch Code: CH21
Dual Degree (B.Tech. & M.Tech.) in Chemical Engineering
2015 Batch

Semester 1

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	CY1001	Chemistry I	3	1	0	0	6	10	S
2	CY1002	Chemistry Laboratory I	0	0	0	3	0	3	S
3	MA1101	Functions of Several Variables	3	1	0	0	6	10	S
4	ME1100	Thermodynamics	3	1	0	0	6	10	E
5	PH1010	Physics I	3	1	0	0	6	10	S
6	PH1030	Physics Lab I	0	0	0	3	1	4	S
7	GN1100	Life Skills	0	0	0	0	3	0	
		NCC/ NSS/ NSO	0	0	0	0	2	0	
		Total Credits :						**47**	

Winter

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	WS1010	Workshop I	0	0	0	3	0	3	E

Semester 2

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	AM1100	Engineering Mechanics	3	1	0	0	6	10	E
2	MA1102	Series and Matrices	3	1	0	0	6	10	S
3	PH1020	Physics II	3	1	0	0	6	10	S
4	CS1100	Introduction to Programming	3	0	0	3	6	12	E
5	CH1020	Principles & Calculations in Chemical	3	1	0	0	6	10	P
6	ID1200	Ecology and Environment	0	0	0	0	2	0	
7		NCC/ NSS/ NSO	0	0	0	0	3	0	
		Total Credits :						**52**	

Summer

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	WS1020	Workshop I	0	0	0	3	0	3	E

Semester 3

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	CH2010	Chemical Engineering Thermodynamics	3	1	0	0	6	10	P
2	CH2012	Continuum Mechanics & Transport Phenomena	3	1	0	0	6	10	P
3	CH2013	Computational Programming & Process Simulation Lab	1	0	0	2	2	5	P
4	CH2061	Computational Techniques	3	1	0	0	6	10	P
5	MAE1	Maths Elective 1	3	0	0	0	6	9	S
6	HSE1	Humanities I	3	0	0	0	6	9	H
		Total Credits :						**53**	

Semester 4

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	CH2014	Fundamentals of Heat & Mass Transfer	3	1	0	0	6	10	P
2	CH2015	Fluid and Particle Mechanics	3	1	0	0	6	10	P
3	CH2016	Thermodynamics Lab	0	0	0	3	2	5	P
4	CY2010	Kinetics and Catalysis	3	0	0	0	6	9	S
5	EE1100	Basic Electrical Engineering	3	1	0	0	6	10	E
6	HSE2	Humanities 2	3	0	0	0	6	9	H
		Total						**53**	

Semester 5

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	BT1010	Life Sciences	3	0	0	0	6	9	S
2	CH3030	Applications of Mass Transfer	3	1	0	0	6	10	P
3	CH3010	Chemical Reaction Engineering	3	1	0	0	6	10	P
4	CH3510	Momentum Transfer & MO Lab	0	0	0	3	2	5	P
5	CH3520	Heat and Mass Transfer Lab	0	0	0	3	2	5	P
6		Dept. Elective 1	3	0	0	0	6	9	P
		Total						**48**	

Semester 6

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1		Materials Science	3	1	0	0	6	10	P
2		Process Control	3	1	0	0	6	10	P
3		Dept. Elective 2	3	0	0	0	6	9	P
4		Dept. Elective 3	3	0	0	0	6	9	P
5		Heat and Mass Transfer Lab 2	0	0	0	3	2	5	P
6		CRE Lab	0	0	0	3	2	5	P
		Total						**48**	

Semester 7

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1		Plant, Process & Product Design	3	1	0	0	6	10	P
2		Chemical Technology	3	1	0	0	6	10	P
3		Plant, Process & Product Design Lab	0	0	0	3	2	5	P
4		Humanities 3	3	0	0	0	6	9	H
5		Dept. Elective 4	3	0	0	0	6	9	P
		Total						**43**	

Semester 8

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1		Dept. Elective 5	3	0	0	0	6	9	P
2		Dept. Elective 6	3	0	0	0	6	9	P
3	CH5100	Multiphase systems	3	0	0	0	6	9	P
4	CH5140	Process Analysis and Simulation	3	0	0	0	6	9	P
5	HS3050	Professional Ethics	2	0	0	0	0	0	
		Total						**36**	

Summer

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	CH5680*	Project 1	0	0	0	0	25	**25**	P
		Total						**25**	

Semester 9

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1		Dept. Elective 7	3	0	0	0	6	9	P
2	CH5680	Project 2	0	0	0	0	25	**25**	
		Total						**34**	

Semester 10

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	CH5680+	Project 3	0	0	0	0	40	**40**	P
		Total						**40**	

Semester	I	II	III	IV	V	VI	VII	VIII	Summer	IX	X	Total
Credits	47	52+6	53	53	48*	48*	43*	36*	25	34	40	557

* Indicated credits are only for core program including Department Electives 7. In addition, students are required to take 72 elective credits (13%) during semesters V-VIII from any dept. including Chemical Engineering, subject to maximum of 60 credits per semester.
***Suggested elective credits*: 9cr. in V, 18cr. each in VI & VII sem; 27 cr. in VII sem.**

Category	Engineering (E)	Professional (P)	Humanities (H)	Sciences (S)	Others	Total
Credits	48	173+63+90	27	84	72	557

B.Tech (Honours) + M.Tech.: (Total credit requirement: 557 + 27 = **584)**

- ***Eligibility***: minimum CGPA of 8.5 at the end of 5th sem without U or W grade in any course.
- ***Extra credit requirement***: 13 credits in VII semester + 14 credits in VIII sem over and above the regular BTech requirement.