

DEPARTMENT OF CHEMICAL ENGINEERING

M.Tech. (Chemical Engineering)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1st YEAR					Semester- I (Autumn)									
1.	CHE-501	Mathematical Methods in Chemical Engineering	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	CHE-503	Advanced Transport Phenomena	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	CHE-505	Advanced Reaction Engineering	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	CHE-507	Advanced Thermodynamics and Molecular Simulations	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.		Program Elective – I	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
				20	15	4								
					Semester-II (Spring)									
1.		Program Elective – II	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.		Program Elective – III	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.		Program Elective – IV	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.		Program Elective – V	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.	CHE-700	Seminar	PEC	2	-	-	-	-	-	-	-	-	100	-
				18										
2nd YEAR					Semester- I (Autumn)									
1.	CHE-701A	Dissertation Stage-I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		12										
					Semester-II (Spring)									
1.	CHE-701B	Dissertation Stage-II (contd. From III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										
		Total Credits		68										

Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.

Program Elective Courses (Chemical Engg.)

PROGRAM ELECTIVE – I (For Autumn Semester)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1.	CHE-511	Process Integration	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	CHE-513	Biochemical Engineering	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	CHE-515	Computational Fluid Dynamics	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	CHE-517	Optimization of Chemical Processes	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-

PROGRAM ELECTIVES – II, III, IV and V (For Spring Semester)

1.	CHE-510	Advanced Process Control	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	CHE-512	Solid and Hazardous Waste Management	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	CHE-514	Pollution Control Systems	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	CHE-516	Kinetics of Polymerization	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.	CHE-518	Waste to Energy Conversion	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
6.	CHE-520	Oil and Gas Transport	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
7.	CHE-522	Nanotechnology in Chemical Engineering	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
8.	CHE-524	Microfluidics	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
9.	CHE-526	Supercritical Fluids: Theory and Applications	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
10.	CHE-528	Introduction to Granular Rheology	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
11.	CHE-530	Drug Delivery	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
12.	CHE-532	Colloids and Interfacial Science	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
13.	CHE-534	Novel Separation Techniques	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
14.	CHE-536	Design of Experiments and Parameter Estimation	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
15.	CHE-538	Industrial Safety and Hazard Management	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
16.	CHE-540	Multiphase Flow	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-