



College of Technology (01)
Department of Chemical Engineering (002)
Under Graduate (03)

Effective From: 2020-21

Sr No	Subject Code	Subject Name	Category	Teaching Scheme				Evaluation Scheme				Total Marks
				L.	T.	P.	Credit	CIE(TH)	CIE(PR)	ESE(TH)	ESE(PR)	
Semester 1												
1	1010273101	Mathematics-I	Basic Science	3	2	0	5	40	0	60	0	100
2	1010153181	English	HSS	1	0	2	2	40	20	60	30	150
3	1010083111	Basic Electrical Engineering	Engineering Science	3	0	2	4	40	20	60	30	150
4	1010123112	Engineering Graphics & Design	Engineering Science	2	0	4	4	40	20	60	30	150
5	1010263104	Chemistry	Basic Science	3	0	2	4	40	20	60	30	150
6	1010123113	Engineering Workshop Practice	Engineering Science	0	0	4	2	0	40	0	60	100
7	1010003196	Induction Programme (Prarambh+Connect)	Mandatory Course	0	0	0	0	0	0	0	0	0
Total				12	2	14	21					800
Semester 2												
1	1010273102	Mathematics-II	Basic Science	3	2	0	5	40	0	60	0	100
2	1010153182	Communication Skills	HSS	1	0	2	2	40	20	60	30	150
3	1010123111	Basic Mechanical Engineering	Engineering Science	3	0	2	4	40	20	60	30	150
4	1010043111	Programming for Problem solving	Engineering Science	3	0	2	4	40	20	60	30	150
5	1010033111	Basic Civil Engineering	Engineering Science	3	0	2	4	40	20	60	30	150
6	1010033196	Environmental Sciences	Mandatory Course	3	0	0	0	40	0	60	0	100
Total				16	2	8	19					800
Semester 3												
1	1010023216	Momentum & Mass Transfer	Professional Core Course	3	0	2	4	40	20	60	30	150
2	1010023217	Industrial Stoichiometry	Professional Core Course	3	1	0	4	40	0	60	0	100
3	1010273205	Partial Differential Equations and Its Application	Basic Science	3	2	0	5	40	0	60	0	100
4	1010263201	Applied Chemistry	Basic Science	3	0	2	4	40	20	60	30	150
5	1010023211	Chemical Engineering Thermodynamics-I	Engineering Science	3	0	0	3	40	0	60	0	100
6	1010343281	Economics and Management	HSS	2	0	0	2	40	0	60	0	100
7	1010003296	Indian Constitution	Mandatory Course	1	0	0	0	40	0	60	0	100
Total				18	3	4	22					800
Semester 4												
1	1010023218	Mechanical Unit Operations	Professional Core Course	3	0	2	4	40	20	60	30	150
2	1010023219	Mass Transfer Operations	Professional Core Course	3	1	2	5	40	20	60	30	150
3	1010023220	Chemical Engineering Thermodynamics-II	Professional Core Course	3	1	0	4	40	0	60	0	100
4	1010023221	Heat Transfer	Professional Core Course	3	0	2	4	40	20	60	30	150
5	1010023222	Chemical Process Technology	Professional Core Course	3	0	2	4	40	20	60	30	150
6	1010273209	Numerical Methods	Basic Science	3	2	0	5	40	0	60	0	100
7	1010343282	Aptitude Building & Professional Skills-I*	HSS	0	1	0	1	0	40	0	60	100
Total				18	5	8	27					900
Semester 5												
1	1010023391	Summer Studio (Industrial Internship)	Project/Seminar	0	0	0	1	0	40	0	60	100
2	1010023316	Separation Techniques	Professional Core Course	3	0	2	4	40	20	60	30	150
3	1010023317	Chemical Reaction Kinetics	Professional Core Course	3	0	2	4	40	20	60	30	150
4	1010023318	Process Dynamics & Control	Professional Core Course	3	0	2	4	40	20	60	30	150
5	1010023336	Transport Phenomena	Professional Elective-I	3	0	0	3	40	0	60	0	100
6	1010023337	Biochemical Engineering	Professional Elective-I	3	0	0	3	40	0	60	0	100
7	1010023361	Safety Management in Process Industries	Open Elective-I	3	0	0	3	40	0	60	0	100
8	1010023362	Industrial & Municipal Solid Waste Management	Open Elective-I	3	0	0	3	40	0	60	0	100
9	1010343381	Aptitude Building and Professional Skills-II*	HSS	0	1	0	1	0	40	0	60	100
10	1010003391	Problem Based Learning-I	Project/Seminar	0	0	2	1	0	40	0	60	100
Total				15	1	8	21					950

Semester 6													
1	1010023392	Winter Studio (Industrial Internship)	Project/Seminar	0	0	0	1	0	40	0	60	100	
2	1010023319	Process Design of Heat & Mass Transfer Equipment	Professional Core Course	3	2	0	5	40	0	60	0	100	
3	1010023320	Chemical Reaction Engineering	Professional Core Course	3	0	2	4	40	0	60	0	100	
4	1010023321	Simulation & Modeling of Dynamic Systems	Professional Core Course	0	0	4	2	0	40	0	60	100	
5	1010023338	Optimization of Chemical Processes	Professional Elective-II	3	0	0	3	40	0	60	0	100	
6	1010023339	Multicomponent Distillation	Professional Elective-II	3	0	0	3	40	0	60	0	100	
7	1010023363	Petroleum Refining	Open Elective-II	3	0	0	3	40	0	60	0	100	
8	1010023364	Petrochemicals	Open Elective-II	3	0	0	3	40	0	60	0	100	
9	1010343382	Aptitude Building and Professional Skills-III*	HSS	0	1	0	1	0	40	0	60	100	
10	1010003392	Problem Based Learning-II	Project/Seminar	0	0	2	1	0	40	0	60	100	
Total				12	3	8	20					Total Marks	800
Semester 7													
1	1010023491	Project-I / Seminar	Project/Seminar	0	0	6	3	0	40	0	60	100	
2	1010023416	Process Development & Project Engineering	Professional Core Course	3	0	0	3	40	0	60	0	100	
3	1010023417	Mechanical Design of Heat & Mass Transfer Equipment	Professional Core Course	3	2	0	5	40	0	60	0	100	
4	1010023436	Process Integration	Professional Elective-III	3	0	2	4	40	20	60	30	150	
5	1010023437	Planning of Experiments & Analysis of Engineering Data	Professional Elective-III	3	0	2	4	40	20	60	30	150	
6	1010023461	Polymer Science & Engineering	Open Elective-III	3	0	0	3	40	0	60	0	100	
7	1010023462	Clean Technology in Process Industries	Open Elective-III	3	0	0	3	40	0	60	0	100	
8	1010023463	Heterogeneous Catalysis & Reactor Design	Open Elective-IV	3	0	0	3	40	0	60	0	100	
9	1010023464	Nanotechnology	Open Elective-IV	3	0	0	3	40	0	60	0	100	
10	1010343481	Employability Enhancement & Job Skills*	HSS	0	1	0	1	0	40	0	60	100	
Total				15	3	8	22					Total Marks	750
Semester 8													
1	1010023492	Project-II	Project/Seminar	0	0	20	10	0	40	0	60	100	
Total				0	0	20	10					Total Marks	100