Intake:	2020 onwards	Specia	lization:	Chemica	nemical and Process Engineering					
	Details of the Curriculum	Str	eam:							
Module	Module Name	٥ م	Time all	l (Tedit		offered	Norm		Evaluation	
Code		Category C/E/O	Lecture	Lab / Tute	GPA	NGPA	GPA	NGPA	CA	WE
	Semester 1		Specializ	ation requirement			15.0			
CE1023	Fluid Mechanics	2/4	2.0				20 80			
CS1033	Programming Fundamentals	С	2	2	2.0		]		20	80
EE1040	Electrical Fundamentals	С	2	2/4	3.0				20	80
MA1014	Mathematics	С	5/2	1	3.0		15.0		20	80
ME1033	Mechanics	C	2	2/4	2.0		ļ		20	80
MT1023	Properties of Materials	C	2	2/4	2.0	-	ļ		20	80
EL1030	Language Skills Enhancement [S1 & S2]	С	0 Total	2	1.0		15.0	0.0	100	0
			TOLAI		15.0	0.0	15.0	0.0	<u> </u>	
	Semester 2		Specializ	ation rec	uiremen	t	2	0.0		
CH1051	Engineering Thermodynamics	С	2	2	3.0	l	_		40	60
CH1044	Fluid Dynamics	C	3	2	4.0		1		40	60
CH1071	Chemistry and Green Chemistry for Process Engineers	С	2	2	3.0		10 0		40	60
CH1061	Chemical and Bioprocess Engineering Principles	С	3	2	4.0		18.0		40	60
MA1024	Methods of Mathematics	С	5/2	1	3.0		]		30	70
EL1030	Language Skills Enhancement [S1 & S2]	C	0	2	1.0		]		100	0
HM-1	Humanities I	E	2	0	2.0		2.0		100	0
			Total		20.0	0.0	20.0	0.0		
CITTO CO.	Semester 3		Specializ			t I	2	0.0	40	
CH2631	Chemical Thermodynamics	C	2	2	3.0	-			40	60
CH2015	Heat and Mass Transfer	C	2	2	4.0		ł		40	60
CH2160 CH2170	Bioprocess Engineering and Practices  Laboratory Practices I	C	0	6	3.0	1	20.0	-	100	60
MA2014	Differential Equations	C	2	0	2.0		20.0		30	70
MA2034	Linear Algebra	C	2	0	2.0		†		30	70
EN1803	Basic Electronics for Engineering Applications	C	2	2	3.0	1	1		30	70
	0 0 11		Total		20.0	0.0	20.0	0.0		<u> </u>
		•			•	•	•	•	•	
	Semester 4		Specializ	ation req	uiremen	t	2:	2.0		
CH2151	Particulate Systems	C	3	2	4.0				40	60
CH2180	Separation Processes	C	3	4	5.0		]		40	60
CH4501	Chemical Kinetics and Reactor Design	C	3	2	4.0		20.0		40	60
CH2210	Materials for Engineering Applications	С	2	2	3.0				30	70
CH2270	Laboratory Practices II	C	0	4	2.0				100	0
MA3024	Numerical Methods	C	2	0	2.0				30	70
HM-2	Humanities II	E	2 Total	0	2.0		2.0		100	0
			TOLAI		22.0	0.0	22.0	0.0		
	Semester 5		Specializ	ation rec	uiremen	t	2	3.0		
CH4045	Process Dynamics and Control	С	2	2	3.0	Ì	_	1	40	60
CH3045	Plant Safety, Health and Environment	C	7/2	1	4.0		1		30	70
CH3034	Process Equipment Design	C	3	2	4.0		1		40	60
CH3055	Energy Systems Engineering	C	2	2	3.0		21.0		40	60
CH3150	Chemical Process Synthesis and Integration	С	2	2	3.0		1		40	60
CH3880	Engineer and Society [S5 & S6]	С	0	2	1.0		]		100	0
MN3043	Business Economics and Financial Accounting	С	3	0	3.0				30	70
MA3014	Applied Statistics	E	2	0	2.0				30	70
MA2024	Calculus	Е	2	0	2.0		2.0		30	70
	Operational Research	Е	2	0	2.0				30	70
MA3030			Total		27.0	0.0	23.0	0.0		
MA3030										
MA3030	to describe True**		Cmastall	ation						
	Industrial Training		Specializ	ation req	uiremen		6	5.0	100	0
MA3030 CH3994	Industrial Training Industrial Training	С		ation req		6.0		6.0	100	0
		С	Specializ Total	ation req	uiremen 0.0		0.0	_	100	0
	Industrial Training	С	Total		0.0	6.0 <b>6.0</b>	0.0	6.0 <b>6.0</b>	100	0
СН3994	Industrial Training  Semester 6		Total Specializ	ation req	0.0 uiremen	6.0 <b>6.0</b>	0.0	6.0		
CH3994 EL3820	Industrial Training  Semester 6  Technical Report Writing and Presentation Skills	C	Total Specializ	ation req	0.0 uiremen 3.0	6.0 <b>6.0</b>	0.0	6.0 <b>6.0</b>	100	0
СН3994	Industrial Training  Semester 6  Technical Report Writing and Presentation Skills Research Project [S6, S7 & S8]		Total Specializ	ation req	0.0 uiremen	6.0 <b>6.0</b>	0.0	6.0 <b>6.0</b>		
CH3994 EL3820 CH4751	Industrial Training  Semester 6  Technical Report Writing and Presentation Skills	C	Total Specializ	ation req	0.0 uiremen 3.0 1.0	6.0 <b>6.0</b>	0.0	6.0 <b>6.0</b>	100 100	0

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Intake:	2020 onwards Specialization: Chemical and Process Engineering									
	Semester 7		Specialization requirement				13.0			
CH4016	Comprehensive Design Project I	С	0	8	4.0				100	0
CH4751	Research Project [S6, S7 & S8]	C	0	2	1.0		7.0		100	0
MN4023	Engineering Economics	С	2	0	2.0		†		30	70
CH4120	Biofuels and Biorefineries	Е	2	2	3.0				40	60
CH4130	Process Optimization	Е	2	2	3.0		İ		40	60
CH4140	Biotechnology	Е	2	2	3.0		3.0		40	60
CH4160	Process Chemicals Management	Е	2	2	3.0		1		40	60
CH4371	Petroleum Trade and Economics	Е	2	2	3.0		İ		30	70
CH4410	Polymeric Materials	Е	2	2	3.0				30	70
CH4026	Process Modelling and Simulation	Е	2	2	3.0		1		40	60
CH4420	Waste Minimization and Resources Recovery	Е	2	2	3.0		3.0		30	70
CH4430	Industrial Chemical Manufacturing Processes	Е	2	2	3.0		1		40	60
CH4235	Polymer Processing Operations	Е	2	2	3.0				30	70
CH3720	Waste to Energy	Е	2	2	3.0		1		40	60
CH3253	Environmental Bioengineering	Е	2	2	3.0		1		30	70
CH4440	Petrochemical Process Operations	Е	2	2	3.0		İ		30	70
CH4285	Food Safety and Hygienic Plant Design	Е	2	2	3.0		1		40	60
			Total		49.0	0.0	13.0	0.0		
		•								
	Semester 8		Specializ	ation req	uiremen		10	0.0		
										0
CH4035	Comprehensive Design Project II	С	0	10	5.0				100	U
CH4035 CH4751	Comprehensive Design Project II  Research Project [S6, S7 & S8]	C C			5.0		10.0		100 100	0
CH4751			0	10			10.0			0
	Research Project [S6, S7 & S8]	С	0	10	1.0		10.0		100	70
CH4751 MN4151	Research Project [S6, S7 & S8] Project Management	C C	0 0 2	10 2 0	1.0		10.0		100	0 70 70
CH4751 MN4151 MN4113	Research Project [S6, S7 & S8] Project Management Production and Operations Management	C C C	0 0 2 2 2	10 2 0 0	1.0 2.0 2.0		10.0		100 30 30	0 70 70 60
CH4751 MN4151 MN4113 CH4275 CH4742	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies	C C C	0 0 2 2 2	10 2 0 0 2	1.0 2.0 2.0 3.0		10.0		100 30 30 40	0 70 70 60 60
CH4751 MN4151 MN4113 CH4275 CH4742 CH4742	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design	C C C E E	0 0 2 2 2 2	10 2 0 0 2 2	1.0 2.0 2.0 3.0 3.0		10.0		100 30 30 40 40	0 70 70 60 60
CH4751 MN4151 MN4113 CH4275 CH4742 CH4450 CH4255	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design  Energy Storage Systems	C C C E E E	0 0 2 2 2 2 2 2	10 2 0 0 2 2 2	1.0 2.0 2.0 3.0 3.0 3.0		10.0		100 30 30 40 40 40	0 70 70 60 60 60
CH4751 MN4151 MN4113 CH4275 CH4742 CH4450 CH4255 CH4651	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design  Energy Storage Systems  Renewable Energy	C C C E E E E E	0 0 2 2 2 2 2 2 2	10 2 0 0 2 2 2 2	1.0 2.0 2.0 3.0 3.0 3.0 3.0		- 10.0		100 30 30 40 40 40 40	0 70 70 60 60 60 60 60
CH4751 MN4151 MN4113 CH4275 CH4742 CH4450 CH4255 CH4651 CH4215	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design  Energy Storage Systems  Renewable Energy  Combustion Technology	C C C E E E E E E	0 0 2 2 2 2 2 2 2 2 2 2	10 2 0 0 2 2 2 2 2 2	1.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0		10.0		100 30 30 40 40 40 40 40	_
CH4751 MN4151 MN4113 CH4275 CH4742 CH4450 CH4255 CH4651 CH4215 CH4460	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design  Energy Storage Systems  Renewable Energy  Combustion Technology  Environmental Engineering and Management	C C C E E E E E E E	0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 2 0 0 2 2 2 2 2 2 2	1.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0		10.0		100 30 30 40 40 40 40 40 30	0 70 70 60 60 60 60 60 70
CH4751 MN4151 MN4113 CH4275	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design  Energy Storage Systems  Renewable Energy  Combustion Technology  Environmental Engineering and Management  Sustainable Process Technology	C C C E E E E E E E E	0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 2 0 0 2 2 2 2 2 2 2 2 2	1.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0		10.0		100 30 30 40 40 40 40 40 30 30	0 70 70 60 60 60 60 60 70
CH4751 MN4151 MN4113 CH4275 CH4742 CH4450 CH4255 CH4651 CH4215 CH4460 CH4351	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design  Energy Storage Systems  Renewable Energy  Combustion Technology  Environmental Engineering and Management  Sustainable Process Technology  Up-stream Oil and Gas Operations	C C C E E E E E E E E E	0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 2 0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0		10.0		100 30 30 40 40 40 40 40 30 30 30	0 70 70 60 60 60 60 70 70 70
CH4751 MN4151 MN4113 CH4275 CH4742 CH4450 CH4255 CH4651 CH4215 CH4460 CH4351 CH4381	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design  Energy Storage Systems  Renewable Energy  Combustion Technology  Environmental Engineering and Management  Sustainable Process Technology  Up-stream Oil and Gas Operations  Petroleum Refining Operations	C C C E E E E E E E E E E E	0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 2 0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3		10.0		100 30 30 40 40 40 40 40 30 30 30 30	00 70 70 60 60 60 60 60 60 70 70 70 70 60 60 60 60 60 60 60 60 60 60 60 60 60
CH4751 MN4151 MN4113 CH4275 CH4742 CH4450 CH4255 CH4651 CH4215 CH4460 CH4351 CH4381 CH4294	Research Project [S6, S7 & S8]  Project Management  Production and Operations Management  Polymer Products Manufacturing Technologies  Polymer Products and Tool Design  Energy Storage Systems  Renewable Energy  Combustion Technology  Environmental Engineering and Management  Sustainable Process Technology  Up-stream Oil and Gas Operations  Petroleum Refining Operations  Bioengineering	C C C E E E E E E E E E E E E	0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 2 0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1.0 2.0 2.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	0.0	10.0	0.0	30 30 40 40 40 40 40 30 30 30 30 40	0 70 70 60 60 60 60 70 70

Total credit requirement for the Specialization	138.0			
Faculty/Specialization Electives beyond the specialization requirements [refer faculty electives table]*				
TOTAL CREDIT REQUIREMENT FOR GRADUATION				

Service modules										
Code	Module Name	Semeter	Time allocation [Hours/Week]		Credits		Offered to	Evaluation %		
	Module (Valle)		Lecture	Lab / Tute	GPA	NGPA	Officien to	CA	WE	

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