

**Revised Curriculum of B.Sc. Engineering Honours Degree Programme**  
**Chemical & Process Engineering Specialization**  
**Department of Chemical & Process Engineering**

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits		Norm		
					GPA	NGPA	GPA	NGPA	Total
Semester 1									
MA1012	Mathematics	C	3.0	1/1	3.0				
CS1032	Programming Fundamentals	C	2.0	3/1	3.0				
ME1032	Mechanics	C	2.0	3/4	2.0				
MT1022	Properties of Materials	C	2.0	3/4	2.0				
CE1022	Fluid Mechanics	C	2.0	3/4	2.0				
EE1012	Electrical Engineering	C	2.0	3/4	2.0				
EL1012	Language Skill Enhancement I	C	-	3/1	1.0		15.0	0.0	15.0
Total for Semester 1					15.0	0.0	15.0	0.0	15.0
Term A									
EL1022	Language Skill Enhancement II	C	-	6/1	1.0				
MN1012	Engineering in Context	C	2.0	-		1.0			
CH1952	Engineering Design	C	2.0	3/1		1.5			
CH1962	Engineering Skill Development	C	1.0	6/1		1.5			
DE1xx2	Non-Technical Elective I*	E			2.0		1.0	4.0	5.0
Total for Term A					3.0	4.0	2.0	0.0	2.0
Semester 2									
CS2812	Visual Programming	C	1.0	3/1	2.0				
EN1802	Basic Electronics	C	2.0	3/4	2.0				
MT2802	Material Science	C	2.0	3/2	2.5				
MA1022	Methods of Mathematics	C	3.0	1/1	3.0				
CH1012	Biological Science Fundamentals	C	2.0	3/2	2.5				
CH1022	Chemistry for Engineers	C	2.0	3/2	2.5				
CH1032	Process Engineering Fundamentals	C	1.5	3/2	2.0		16.5	0.0	16.5
Total for Semester 2					16.5	0.0	16.5	0.0	16.5

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Semester 3									
ME2012	Mechanics of Materials 1	C	1.5	3/2	2.0				
ME2122	Engineering Drawing and Computer Aided Modelling	C	2.0	3/1	3.0				
ME1822	Basic Engineering Thermodynamics	C	1.5	3/2	2.0				
EE2802	Applied Electricity	C	1.5	3/2	2.0				
EN2852	Applied Electronics	C	1.5	3/2	2.0				
MA2012	Differential Equations	C	2.0		2.0				
MA2022	Calculus	C	2.0		2.0				
CH2042	Fuels and Lubricants	C	2.0	3/2	2.5				
CH2052	Transport Phenomena 1	C	3.0	3/2	3.5		21.0	0.0	21.0
Total for Semester 3					21.0	0.0	21.0	0.0	21.0
Semester 4									
MA2032	Linear Algebra	C	2.0	-	2.0				
CH2062	Transport Phenomena II	C	3.0	3/2	3.5				
CH2072	Chemical Kinetics and Thermodynamics	C	2.5	3/2	3.0				
CH2082	Mass Transfer Operations 1	C	4.0	3/2	4.5				
CH3092	Environmental Science	C	2.0	3/2	2.5				
CH3102	Polymer Science and Technology	C	2.0	3/2	2.5				
CH2952	Technical Report Writing and Presentation Skills	C	1.0	3/1		2.0	18.0	2.0	20.0
Total for Semester 4					18.0	2.0	18.0	2.0	20.0

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Semester 5									
CH3112	Particulate Systems	C	3.0	3/2	3.5		18.0	0.0	18.0
MA3022	Numerical Methods	C	2.0	-	2.0				
CH3122	Plant and Equipment Design 1	C	3.0	3/1	4.0				
MN3052	Industrial Management and Marketing	C	2.5	3/2	3.0				
CH3132	Energy Efficiency and Conservation	C	2.0	3/2	2.5				
CH3142	Reactor Engineering	C	2.5	3/2	3.0				
CH3212	Polymer Process Engineering	E	2.0	3/2	2.5		5.0	0.0	5.0
CH3222	Polymer Physics	E	2.0	3/2	2.5				
CH3232	Bioprocess Technology	E	2.0	3/2	2.5				
CH3242	Food Process Engineering	E	2.0	3/2	2.5				
CH3252	Environmental Engineering	E	2.0	3/2	2.5				
CH3262	Renewable Energy Engineering	E	2.0	3/2	2.5				
CH3702	Computer Aided Chemical Engineering	O	2.0	3/2	2.5		0.0	0.0	0.0
Total for Semester 5					35.5	2.0	23.0	0.0	23.0
Term B & Semester 6									
CH3992	Industrial Training	C	-	-		6.0	0.0	6.0	6.0
Total for Term B & Semester 6					0.0	6.0	0.0	6.0	6.0

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Semester 7									
MN3042	Business Economics and Financial Accounting	C	2.5	3/2	3.0		17.0	0.0	17.0
MN4022	Engineering Economics	C	2.0	-	2.0				
CH4152	Mass Transfer Operations II	C	4.0	3/2	4.5				
CH4202	Comprehensive Design Project**	C		8	4.0				
CH4172	Process Dynamics and Control	C	3.0	3/2	3.5				
CH4272	Design and Characterization of Polymer Products	E	2.0	3/2	2.5		2.5	0.0	2.5
CH4282	Hygienic Plant Design	E	2.0	3/2	2.5				
CH4292	Sustainable Engineering	E	2.0	3/2	2.5				
MN4062	Organizational Behaviour and Management	O	1.5	3/2	2.0		0.0	0.0	0.0
MA4022	Operational Research	O	3.0		3.0				
CH4712	Chemical Process Design and Integration	O	2.0	3/2	2.5				
Total for Semester 7					32.0	0.0	19.5	0.0	19.5
Term C									
CH4962	Research Project	C	-	-		2.0	0.0	2.0	2.0
DE3xx2	Non-Technical Elective II*	E	-	-	2.0		2.0	0.0	2.0
Total for Term C					2.0	2.0	2.0	2.0	4.0

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					GPA	NGPA	GPA	NGPA	Total
Semester 8									
CH4202	Comprehensive Design Project**	C	-	8	4.0		12.5	0.0	12.5
MN4122	Human Resource Management and Industrial Relations	C	2.0	-	2.0				
CH4192	Plant and Equipment Design 11	C	1.5	3/2	2.0				
CH4182	Safety and Loss Prevention	C	2.0	3/2	2.5				
CH4702	Process Modelling and Simulation	C	1.5	3/2	2.0				
CH4302	Mould and Die Design for Polymer Products	E	2.0	3/2	2.5		2.5	0.0	2.5
CH4312	Biochemical Engineering	E	2.0	3/2	2.5				
CH4322	Clean Technology	E	2.0	3/2	2.5				
MN4042	Technology Management	O	2.0	-	2.0		3.0	0.0	3.0
MN4112	Production and Operations Management	O	2.0	-	2.0				
MN4072	Small Business Management and Entrepreneurship	O	2.0	-	2.0				
MA4032	Time Series and Stochastic Process	O	3.0	-	3.0				
MA4042	Neural Networks and Fuzzy Logic	O	3.0	-	3.0				
CH4722	Total Environmental Quality Management	O	2.0	3/2	2.5		3.0	0.0	3.0
Total for Semester 8					35.5	0.0	18.0	0.0	18.0
Total for the Programme					177.5	14.0	136.0	14.0	150.0

\* - Weekly load of lectures and lab/Assignment hrs vary among different Non-technical modules.

\*\* - A total of 8 credits for Comprehensive Design Project over Semester 7 and Semester 8.

**Modules Offered to Other Fields of Specialization**

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits	
					GPA	NGPA
Semester 2						
CH2802	Process Engineering	-	1.5	3/2	2.0	

Effective for 2009 Intake onwards