Bachelor of Science in Chemical Engineering

1st Year / 1st Sem

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
CHEM	101	General Chemistry I	3	3	4		
PHY	101	General Physics I	3	3	4	MA 101	
MA	101	Calculus I	4	0	4		
ESP	101	Introduction to Academic Discourse	3	0	3		
ARB	101	Practical Grammar	2	0	2		
HPE	101	Health and Physical Education	1	0	1		
			16	**6**	**18**		

1st Year / 2nd Sem

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
PHY	102	General Physics II	3	3	4	MA 102	PHY 101
MA	102	Calculus II	4	0	4		MA 101
ESP	102	Introduction to Report Writing	3	0	3		ESP 101
ARB	102	Objective Writing	2	0	2		ARB 101
ISL	101	Belief and Its Consequences	2	0	2		
CSE	101	Introduction to Programming	1	3	2		
			15	**6**	**17**		

2nd Year / 1st Sem

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
MA	201	Calculus III	3	0	3		MA 102
MA	202	Probability and Statistics for Engineers	3	0	3		MA 102
ESP	201	Academic and Professional Communication	3	0	3		ESP 102
ISL	201	Professional Ethics	2	0	2		ISL 101
CHEM	211	General Chemistry II	3	0	3		CHEM 101
CHEM	212	General Chemistry II Lab	0	3	1	CHEM 211	
CE	201	Principles of Chemical Engineering	3	0	3	CHEM 211	PHY 102
			17	**3**	**18**		

2nd Year / 2nd Sem

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
MA	203	Elements of Differential Equations	3	0	3		MA 102
CSE	201	Introduction to Data Science	3	0	3		CSE 101, MA 202
CE	202	Materials Science	3	0	3		CHEM 211
CE	203	Introduction to Chemical Engineering Computing	1	0	1		CSE 101, CE 201
CE	204	Introduction to Chemical Engineering Computing Lab	0	3	1	CE 203	
CE	205	Fluid Mechanics	3	0	3	MA 203	
CE	206	Organic Chemistry	3	0	3		CHEM 211
CE	207	Organic Chemistry Lab	0	3	1	CE 206	
			16	**6**	**18**		

3rd Year / 1st Sem

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
MA	301	Numerical Methods for Engineers	3	0	3		CSE 101, MA 201
CSE	301	Introduction to Artificial Intelligence	3	0	3		CSE 201
ARB	201	Literary Styles	2	0	2		ARB 102
CE	301	Chemical Engineering Thermodynamics	3	0	3		MA 202, CE 203
CE	302	Heat Transfer	3	0	3		CE 201 CE 205
CE	303	Mass Transfer	3	0	3		CE 205
			17	**0**	**17**		

3rd Year / 2nd Sem

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
MS	301	Business and Entrepreneurship	2	0	2		ESP 201
ISL	301	Human Right in Islam	2	0	2		ISL 201
CE	304	Separation Processes	3	0	3		CE 301
CE	305	Kinetics and Reactor Design	3	0	3	CE 307	MA 301
CE	306	Chemical Engineering Lab I	0	6	2		ESP 201, CE 302, CE 303
CE	307	Physical Chemistry	3	0	3		CE 301
CE	308	Physical Chemistry Lab	0	3	1	CE 307	
CE	300	Design Project I	1	3	2		ESP 201, CE 301, CE 302, CE 303
			14	**12**	**18**		

4th Year / 1st Sem

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
CE	401	Process Dynamics and Control	3	0	3		MA 301 CE 304
CE	402	Plant Design and Economics	3	0	3		CE 305, CE 306
CE	403	Chemical Engineering Lab II	0	6	2	CE 401	CE 305, CE 306
CE	4XX	Chemical Engineering Elective I	3	0	3		CE 300
CE	4XX	Chemical Engineering Elective II	3	0	3		CE 300
CE	400	Design Project II	1	3	2		MS 301, CE 305, CE 300
			13	**9**	**16**		

4th Year / 2nd Sem

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
CE	490	Internship	0	0	6		122 Credits Completion
			0	**0**	**6**		

Electives

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite
CE	404	Polymer Technology	3	0	3		CE 300
CE	405	Desalination	3	0	3		CE 300
CE	406	Corrosion	3	0	3		CE 300
CE	407	Process pollution control	3	0	3		CE 300

Electives

Course	Code	Course Title	TH	LH	CH	Co- requisite	Pre-requisite