

Bachelor of Science in Chemical Engineering for Full Time Students

Preparatory Year								
First Semester (Beginners Level)			Second Semester (Intermediate Level)			Third Semester (Advanced Level)		
Course Number	Course Title	Contact Hours	Course Number	Course Title	Contact Hours	Course Number	Course Title	Contact Hours
PRPE 0021	Beginner Enhanced Learning	10	PRPW 0041	Intermediate Writing Skills	10	PRPW 0061	Advanced Writing Skills	10
			PRPC 0041	Intermediate Comm. Skills	10	PRPC 0061	Advanced Comm. Skills	10
PRPC 0021	Beginning Comm. Skills	10	PRPI 0041	Intermediate Enhanced Learning	1	PRPA 0061	Advanced Enhanced Learning	1
			PRPT 0041	TOEFL Prep. I	2	PRPT 0061	TOEFL Prep. II	2
FRPW 0021	Beginning Writing Skills	10	PRPL 0011	Theories & App. of Learning I	2	PRPL 0012	Theories & App. of Learning II	2
			PRPM 0012	Intermediate Algebra	5	PRPM 0022	Pre-Calculus	5
Total Contact Hours		30	Total Contact Hours		30	Total Contact Hours		30

FRESHMAN YEAR (36 Credit Hours)											
FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Lab / Tutorial					Lecture	Lab / Tutorial	
COMM 1311	Written Communication	3	3	0	-	ALIS 1211	Arabic and Islamic Studies	2	2	0	-
UNIV 1211	Professional Development and Competencies	2	2	0	-	PHED 1111	Active Living Lifestyle	1	1	0	-
MATH 1422	Calculus I	4	4	1	(P)PRPM 0022	COM M 1312	Writing and Research	3	3	0	(P)COM M 1311
PHYS 1421	Physics for Engineers I	4	3	3	(P)PRPM 0022	UNIV 1212	Critical Thinking & Problem Solving	2	2	0	(P)UNIV 1211
CHEM 1421	Chemistry for Engineers I	4	3	3	(P)PRPM 0022	MATH 1423	Calculus II	4	4	1	(P)MAT H 1422
GEEN 1211	Intro to Engineering	2	2	0	(P)PRPM 0022	CHEM 1422	Chemistry for Engineers II	4	3	3	(P)CHEM 1421
						PHED 1112	Healthy Behaviors & Management	1	1	0	(C)PHED 1111
Total		19	17	7		Total		17	16	4	

SOPHOMORE YEAR (35 Credit Hours)											
FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Lab/Tutorial					Lecture	Lab / Tutorial	
COMM 2311	Oral Communication	3	3	0	(P)COMM 1312	MEEN 2311	Materials Engineering	3	3	0	(P)CHEM 1421
UNIV 1213	Leadership And Teamwork	2	2	0	(P)UNIV 1212	GEEN 2313	Thermodynamics I	3	3	0	(P)MATH 1324 (P)CHEM 1421
MATH 1324	Calculus III	3	3	1	(P)MATH 1423	MATH 2332	Ordinary Differential Equations	3	3	1	(P)MATH 1324
CHEN 2391	Organic Chemistry	3	3	0	(P)CHEM 1422	PHYS 1422	Physics for Engineers II	4	3	3	(P)PHYS 1421 (P)MATH 1422
GEEN 2211	Engineering Computing	2	1	3	(P)MATH 1423	ALIS 1212	The Social System in Islam	2	2	0	
ASSE 2111	Learning Outcome Assessment I	1	1	0	Sophomore Level						
CHEN 2311	Principles of Chemical Engineering	3	3	0	(P)PHYS 1421 (P)MATH 1422	COM M 2312	Technical & Professional Communication	3	3	0	(P)COM M 2311
Total		17	16	4		Total		18	17	4	

JUNIOR YEAR (33 Credit Hours)											
FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Lab/Tutorial					Lecture	Lab / Tutorial	
GEEN 3314	Electric Circuits and Electronics	3	2	3	(P)PHYS 1422 & Junior Level Standing (≥ 60 Student Credit Hours)	CHEN 3494	Separation Process	4	3	3	(P)GEEN 3311 (P)CHEN 2311 (P)CHEN 3315
GEEN 3311	Intro to Fluid Mechanics	3	3	0	(P)GEEN 2313	Social Science	Social Science Elective	3	3	0	Select one from list
ALIS 2211	Arabic and Islamic Studies	2	2	0	(P)ALIS 1212	CVEN 4344	Engineering Probability & Statistics	3	3	-	(P)MATH 2332
CHEN 3313	Biology	3	3	0	(P)CHEN 2391	MEEN 3333	Heat Transfer	3	3	0	(P)GEEN 3311
CHEN 3315	Physical Chemistry	3	2	3	(P)CHEM 1422	CHEN 3322	Chemical Engineering Thermodynamics II	3	3	0	(P)CHEN 3315 (P)GEEN 3311
ASSE 3211	Learning Outcome Assessment II	2	2	0	ASSE 2111 & Junior Level						

						MEEN 3111	Thermo fluids & Energy Lab	1	0	3	(P)GEEN 3311 (C)MEEN 3333
Total		16	14	6		Total		17	15	6	

SUMMER OF JUNIOR YEAR (3 Credit Hours)				
Course Number	Course Title	Credit Hours		Pre-requisite
CHEN 3301	Internship	3	8 weeks (320 hours) full time	End of Junior Year (summer before graduation) and department approval

SENIOR YEAR (32 Credit Hours)											
FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lecture	Lab / Tutorial					Lecture	Lab / Tutorial	
CHEN 4492	Process Control	4	3	3	(P)CHEN 3494 (P)MEEN 3333	ALIS 2212	The Biography of Prophet Mohammad	2	2	0	ALIS 1212
CHEN 4493	Reaction Engineering	4	3	3	(P)CHEN 3494 (P)CHEN 3322	CHEN 4422	Plant Design	4	3	3	(P)CHEN 4320
CHEN 4320	Process Simulation	3	3	0	(P)CHEN 3494 (P)MEEN 3333	CHEN 4397	Chemical Engineering Senior Design II	3	3	1	(P)CHEN 4396
CHEN 4396	Chemical Engineering Senior Design I	3	3	1	(P)CHEN 3301 (P)CHEN 3494 (C)CHEN 4493 & department approval	GEEN 4311	Engineering Economy	3	3	0	90 student credit hours
CHEN XXXX	Chem Tech. Elective I	3	3	0	**Graduation year and dept. approval. Select from list. (P)CHEN 3494 (P)MEEN 3333	CHEN XXXX	Chem Tech. Elective II	3	3	0	**Graduation year and department approval. Select from list. (P) CHEN 3394 (P) MEEN 3333
Total		17	15	7		Total		15	14	4	
TOTAL DEGREE CREDIT HOURS = 139											

Electives: Social Science Elective: Choose one - HIST 1311 World Civilizations, PSYC 1311 Into. to Psychology, ECON 1311 Into. to Macroeconomics, ECON 1312 Into. to Microeconomics, GEGR 1311 World Regional Geography, SUST 1311 Into.to Sustainability, FREN 1311 Into.to French Language, SPAN 1311 Into.to Spanish Language

No Pre-requisite for all Social Electives Courses

Electives: CHEN 4312 Polymer Engineering, CHEN 4315 Catalysis, CHEN 4332 Refinery Engineering, CHEN 4351 Environmental Engineering, CHEN 4352 Petrochemical Technology, CHEN 4355 Quality Control, CHEN 4360 Plant Safety Engineering, MEEN 4344 Corrosion

Pre-requisite for electives: CHEN 3494 Separation Process, MEEN 3333 Heat Transfer