

Chemical Engineering

List of courses

First semester

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	ES131	Engg. Mathematics I	(4+8)12		
2	ES141	Applied Physics	(4+8)12		
3	ES143	Applied Physics Lab.	(3+0) 3		ES141
4	ES161	Tech. Arabic Writing	(3+3) 6		
5	ES171	Tech. English Writing	(3+6) 9		
6	ES165	Engg. Drawing	(3+3) 6		
Sum			48		

Second semester

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	ES132	Engg. Mathematics II	(4+8) 12		ES131
2	ES146	Engg. Chemistry	(3+6) 9		
3	ES148	Engg. Chemistry Lab	(3 +0) 3	ES146	
4	ES130	Environmental Pollution	(3+3) 6		
5	ES152	Computer Programming	(3+6) 9		
6	ES156	Workshop Technology	(3+6) 9		
Sum			48		

Third Semester

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	ES231	Engg. Mathematics III	(4+8) 12		ES131
2	CHE201	Introduction to chem. Eng. I	(3+6) 9		ES146 ES141
3	CHE211	Thermodynamics I	(3+6) 9		ES146 ES141
4	CHE231	Applied Mechanics	(4+8) 12		ES132, ES141
5	CHE223	Physical Chemistry with Eng. App.	(3+6)9+(3+0)3		ES146 ES141
6	CHE225	Fundamentals of organic chem. I	(3+6) 9		ES146 ES141
Sum			63		

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Fourth semester

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	CHE202	Introduction To Chem. Eng. II	(3+6) 9		CHE201
2	ME305	Fluid Mechanics	(3+6) 9		CHE231 CHE211
3	ME222	Strength Of Materials	(3+6) 9		ES231, CHE231
4	CHE226	Fundamentals Of Organic Chem. II	(3+6) 9		CHE225
5	CHE212	Thermodynamics II	(3+6) 9		CHE211
6	ME203	Materials Science	(3+4) 7		ES141
7	CHE227	Fundamentals Of Organic Chem. lab	(3+0) 3	CHE226	CHE225 ES148
Sum			55		

Fifth semester

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	ME311	Heat Transfer	(3+6) 9		ES231, CHE211
2	CHE341	Petroleum refining processes	(3+6) 9		CHE226
3	ME205	Materials Science Lab	(2+3) 5	ME204	ME222 ME203
4	CHE331	Instrumental analysis for eng. & lab	(3+6) 9		CHE225
5	ME204	Eng. Materials	(3+6) 9		ME203
6	CHE321	Kinetics & reactor design I	(3+6) 9		CHE202 CHE212
7	CHE311	Mass transfer I	(3+6) 9		CHE202 CHE212
Sum			59		

Sixth semester

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	CHE312	Mass Transfer II	(3+6) 9		CHE311
2	CHE322	Kinetics & Reactor Design II	(3+6) 9		CHE321
3	IE307	Engineering Economy	(3+6) 9		ES132
4	CHE342	Petrochemical Technology	(3+6) 9		CHE341
5	CHE301	Transport phenomena	(3+6) 9		ME305 ME311
6	CHE344	Natural Gas Processing	(3+6) 9		CHE341
7	CHE302	Chem. Eng. Unit Operation Lab I	(3+3) 6		ME311 ME305 CHE202
Sum			60		

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Seven Semesters

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	EE301	Electrical Eng. Fundamental	(3+6) 9		ES132 ES143
2	CHE303	Numerical Methods In Chem. Eng.	(3+6) 9		ES231, ES152
3	CHE471	Polymer engineering	(3+6) 9		CHE341
4	CHE432	Process dynamic & control & Lab	(3+6) 9		CHE212 CHE301 ES231
5	CHE481	Plant design	(4+8) 12		IE307
6	CHE421	Project I	(4+4) 8		
7	ES233	Statistics and Probability	(3+6) 9		ES231
Sum			65		

Eighth Semester

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	CHE452	Desalination plants	(3+6) 9		CHE212 CHE301
2	CHE401	Chem. Eng. Unit operation lab II	(3+3) 6		CHE322 CHE312 CHE302
3	CHE460	Pollution and pollution control	(3+6) 9		CHE212 CHE301
4	CHE491	Corrosion and corrosion control	(3+6) 9		ME204, ME222
5	+	Elective	(3+6) 9		+
6	CHE422	Project II	(6+18) 18		
Sum			60		

Electives

S.No	Course No.	Course Title	Unit	Coreq.	Prereq.
1	ME402	Thermal Power Plants	(3+6) 9		CHE212 CHE301
2	CHE413	Heat Exchangers Process And Design	(3+6) 9		CHE212 CHE301
3	CHE434	Comp. Aided Design In Chem. Eng. Lab	(3+6) 9		EE301, CHE303
4	CHE445	Gas Liquefaction	(3+6) 9		CHE344
5	CHE424	Industrial Catalysis Design	(3+6) 9		CHE322
6	CHE450	Selected topics in chem. Eng.	(3+6) 9		
7	CHE451	Membrane Separation Processes	(3+6) 9		CHE212. CHE301
8	CHE453	Waste – Water Treatment	(3+ 6) 9		CHE212. CHE301

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9	CHE454	Equilibrium Stage – Wise Processes	(3+ 6) 9		
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Total courses in CHE department = 40	Average Number of courses in the semester = 7
Total units in CHE department = 362	Average Number of units in the semester = 60