

Table A1-1 Compulsory College Requirements with a Total of (29) Credit Hours

Course Number	Course Title	Credit Hours	Remarks / Subject Prerequisites
0301101	Calculus 1	3	
0301102	Calculus 2	3	0301101
0301203	Ordinary Differential Equations	3	0301102
0302101	General Physics (1)	3	
0302102	General Physics (2)	3	0302101
0302111	General Physics lab (1)	1	0302101/ concurrent
0302112	General Physics lab (2)	1	0302102/ concurrent
0303101	General Chemistry (1)	3	
0303105	General Chemistry lab (1)	1	0303102 / concurrent
0402110	Engineering Workshop	1	
0403198	Engineering Drawing	2	
0403209	Computer-Aided Engineering Drawing	1	0403198
0403302	Engineering Economy	3	
0404200	Communications Skills	1	

Table A1-2 Chemical Engineering Department Compulsory Courses

Course Number	Course Title	Credit Hours
0404204	Data Analysis and Design of Experiments	3
0404207	Principles of Chemical Engineering (1)	3
0404208	Principles of Chemical Engineering (2)	3
0404212	Fluid Mechanics	3
0404305	Numerical Analysis	3
0404306	Computer Applications in Chemical Engineering (1)	1
0404315	Fluid Mechanics Lab	1
0404317	Heat Transfer	3
0404318	Mass Transfer	3
0404325	Thermodynamics for Chemical Engineering (1)	3
0404326	Thermodynamics for Chemical Engineering (2)	3
0404327	Material Science and Engineering	3
0404328	Chemical Reaction Engineering (1)	3

0404346	Unit Operation (1)	3
0404405	Creative Solutions to Engineering Problems	1
0404407	Analysis, Modeling and Simulation of Chemical Processes	3
0404408	Computer Applications in Chemical Engineering (2)	1
0404421	Chemical Reaction Engineering (2)	3
0404422	Chemical Reaction Lab	1
0404423	Heat Transfer and Thermodynamics Lab	1
0404433	Unit Operation (2)	3
0404457	Equipment Design and Plants Economics	3
0404476	Petroleum Refining Engineering	3
0404472	Principles of Instrumental Analysis	3
0404479	Practical Training	3
0404533	Unit Operation Lab	1
0404541	Process Dynamics and Control	3
0404542	Process Dynamics and Control Lab	1
0404555	Chemical Industries Engineering	2
0404557	Plant Design	3
0404558	Industrial Safety Engineering	3
0404559	Graduation Project (1)	0
0404569	Graduation Project (2)	3

Table A1-2 Chemical Engineering Department Elective Courses

0404501	Optimization of Chemical Processes	3
0404522	Renewable Energy Engineering	3
0404550	Industrial Management	3
0404560	Solid Waste Management	3
0404562	Environmental Engineering Management	3