

**Bachelor of Science in Chemical Engineering
Study Plan (Fall Start)**

Total Credit Hours: 136

First Year (Freshman)

Semester 1

Code	Title	Cr.	Prerequisite
ARL 100	Communication Skills in Arabic I	3	None
ENG 100	English I	3	TOEFL 500
SOC 201	UAE and GCC Society	3	None
STT 100	General Statistics	3	None
UNS 100	University Study Skills	3	None
MTT 102	Calculus I	3	Math Placement Test or MTT 101

Total Credit Hours 18

Semester 2

Code	Title	Cr.	Prerequisite
ENG 105	English II	3	ENG 100+UNS 100
PHY 102	Physics and Engineering Applications I	3	MTT 102
PHY 102L	Physics and Engineering Applications I Lab	1	MTT 102+ PHY 102 (co-req)
MTT 200	Calculus II	3	MTT 102
CHE 205	General Chemistry I	3	ENG 100
CHE 201L	Chemistry Lab	1	CHE 205 (co-req)
CME 200	Introduction to Chemical Engineering	3	None

Total Credit Hours 17

Second Year (Sophomore)

Semester 3

Code	Title	Cr.	Prerequisite
ENG 201	Business and Technical Communication	3	ENG 105
MTT 201	Calculus III	3	MTT 200
CSC 201	Structured Programming	3	MTT 102
PHY 201	Physics and Engineering Applications II	3	PHY 102
PHY 201L	Physics and Engineering Applications II Lab	1	PHY 102 + PHY 201 (co-req)
CME 210	Principles of Chemical Engineering	4	CHE 205 + CME 200

Total Credit Hours 17

Semester 4

Code	Title	Cr.	Prerequisite
ISL 100	Islamic Culture	3	None
CME 220	Chemical Engineering Thermodynamics I	3	PHY 102+CHE 205+CME 210+MTT 205(Co-req)
CHE 206	General Chemistry II	3	CHE 205
CHE 206L	General Chemistry II Lab	1	CHE 205 + CHE 206 (Co-req)
MTT 205	Differential Equations	3	MTT 200+MTT 204 (Co-req)
MTT 204	Introduction to Linear Algebra	3	MTT 200+MTT 205 (Co-req)

Total Credit Hours 16

Third Year (Junior)

Semester 5

Code	Title	Cr.	Prerequisite
CHE 305	Organic Chemistry	4	CHE 206
CME 300	Chemical Engineering Thermodynamics II	3	CME 220
CME 310	Fluid Mechanics for Chemical Engineers	3	CME 220
CHE 330	Physical Chemistry	3	CME 220+CHE 206
MEC 300	Materials Science	3	CHE 205
CME 341	Heat Transfer	3	CME 310 (Co-req)

Total Credit Hours 19

Semester 6

Code	Title	Cr.	Prerequisite
GEN200	Engineering Economy	3	ENG 105 + MTT 102
CME 301	Mass Transfer	3	CME 300 + CME 341
CME 321	Process Dynamics and Control	3	CME 331 (Co-req)
CME 331	Chemical Reaction Engineering	3	CHE 330 +MTT 205
CME 305	Modeling and Simulation in Chemical Eng.	2	CME 210+CME 310+CME 331 (Co-req)
PSY 201	General Psychology	3	None

Total Credit Hours 17

Summer Semester

Code	Title	Cr.	Prerequisite
CME 399i	Internship	3	90 credit hours

Fourth Year (Senior)

Semester 7

Code	Title	Cr.	Prerequisite
CME 400	Separation Processes	3	CME 301+CME 305
CME 450	Process Design	3	CME 331+CME 400 (Co-req)
CME 320	Chemical Engineering Laboratory I	1	CME 310 + CME 341+ CME 301
ME1	Major Elective I	3	
ME2	Major Elective II	3	

Total Credit Hours 13

Semester 8

Code	Title	Cr.	Prerequisite
CME 499	Design Project (Capstone)	3	Senior Level
CME 430	Chemical Engineering Laboratory II	1	CME 321+CME 331+CME 400
CIV 402	Engineering Ethics	3	Senior Level
ME3	Major Elective III	3	
OE1	Open Elective I	3	
OE2	Open Elective II	3	

Total Credit Hours 16