B.S. in Chemical Engineering (CHE)
Four Year Academic Plan
Digital/Business Foundation

Freshman Year											
Course	Type	Title	LT	LB	Cr	Course	Type	Title	LT	LB	Cr
CHEM 101	MS	Principles of Chemical Science I	3	3	4	CHEM 102	MS	Principles of Chemical Science II	3	4	4
ENGL 101	GS	Introd. to Academic Discourse	3	0	3	ENGL 102	GS	Introduction to Report Writing	3	0	3
IAS 121	GS	Language Foundation	2	0	2	ICS 104	DF	Introd. to Programming in Python and C	2	3	3
MATH 101	MS	Calculus I	4	0	4	MATH 102	MS	Calculus II	4	0	4
PE 101	GS	Health and Physical Education I	0	2	1	PHYS 102	MS	General Physics II	3	3	4
PHYS 101	MS	General Physics I	3	3	4						
		Total	**15**	**8**	**18**			**Total**	**15**	**10**	**18**
Sophomore Year											
Course	Type	Title	LT	LB	Cr	Course	Type	Title	LT	LB	Cr
CHE 200	CR	Principles of Chemical Engineering	3	2	3	CHE 204	CR	Fluid Mechanics	3	0	3
CHEM 201	MS	Organic Chemistry I	3	0	3	CHE 212	CR	Introduction to Chemical Engineering Computing	1	3	2
CHEM 202	MS	Organic Chemistry Laboratory	0	4	1	COE 292	DF	Introduction to Artificial Intelligence	3	0	3
IAS 111	GS	Belief and its Consequences	2	0	2	ENGL 214	GS	Academic & Professional Communication	3	0	3
ISE 291	DF	Introduction to Data Science	3	0	3	MATH 208	MS	Intro to Diff Equations & Linear Algebra	3	0	3
MATH 201	MS	Calculus III	3	0	3	MSE 207	MS	Materials Science for CHE	2	0	2
		Total	**14**	**6**	**15**			**Total**	**15**	**3**	**16**
Junior Year											
Course	Type	Title	LT	LB	Cr	Course	Type	Title	LT	LB	Cr
CHE 300	CR	Heat Transfer	3	0	3	BUS 200	DF	Business & Entrepreneurship	3	0	3
CHE 303	CR	Chemical Engineering Thermodynamics	3	0	3	CHE 306	CR	Separation Processes	3	0	3
CHE 304	CR	Mass Transfer	3	0	3	CHE 309	CR	Chemical Engineering Laboratory I	0	6	2
CHEM 311	MS	Physical Chemistry II: Kinetics and Spectroscopy	3	0	3	CHE 360	CR	Numerical Methods in Chemical Engineering	3	0	3
CHEM 312	MS	Kinetics and Spectroscopy Laboratory	0	4	1	STAT 201	MS	Probability and Statistics for Engineers and Scientist	3	1	3
IAS 212	GS	Ethics and Governance	2	0	2	BUS 300	GS	Career Essentials	0	2	1
		Total	**14**	**4**	**15**			**Total**	**12**	**09**	**15**
Summer Training						CHE 399	CR	Summer Training	0	0	1

Senior Year											
Course	**Type**	**Title**	**LT**	**LB**	**Cr**	**Course**	**Type**	**Title**	**LT**	**LB**	**Cr**
CHE 401	CR	Process Dynamics and Control	3	0	3	CHE 409	CR	Chemical Engg Lab II	0	6	2
CHE 402	CR	Kinetics & Reactor Design	3	0	3	CHE 412	CR	Senior Design Project II	0	6	3
CHE405	CR	Process Design & Economics	3	0	3	CHE 4XX	CE	Chem. Engg Elective II	3	0	3
CHE 4XX	CE	Chem. Engg Elective I	3	0	3	GS XXX	GS	GS Elective	3	0	3
XXX xxx	EN	Engineering Elective	3	0	3	IAS XXX	GS	Islamic/Arabic Elective	2	0	2
CHE 411	CR	Senior Design Project I	0	1	0	XXX xxx	FE	General Elective	3	0	3
		Total	**15**	**1**	**15**			**Total**	**11**	**12**	**16**
								Total Credit Hours			**129**

MS	Math and Science	43
GS	General Studies	22
CR	Core Subjects	40
CE	Core Electives	6
EN	Engineering Electives	3
TE	Technical Electives	0
FE	Free Electives	3
DF	Digital/Business Foundation	12
	Total	**129**
	Total Core (CR+CE)	**46**
	Total Engineering (Total Core + EN)	**49**