

Chemical Engineering

The curriculum is 128 credits comprised of a Basic Program plus Electives which students select to meet both University Core requirements and requirements of the Chemical Engineering degree.

Student Performance and Retention Requirements: Students are required by Board of Regents policy to achieve a C- or better grade in each class used to satisfy the Bachelor of Science degree requirements. Moreover, students must achieve a C- or better grade prior to taking follow-on courses.

Freshman Year	Credits	
	Fall	Spring
ECHM 100 - Intro to Chemical Engr or EBIO 100 - Intro to Biological Engr	2	
M 171Q - Calculus I	4	
Univ Core Electives (IA, IH, IS or D)	3	
US or W Core course	3	
CHMY 141 - College Chemistry I & CHMY 142 - College Chemistry I Lab	4	
M 172 - Calculus II		4
US or W Core course		3
Univ Core Electives (IA, IH, IS or D)		3
CHMY 143 - College Chemistry II & CHMY 144 - College Chemistry II Lab		4
EGEN 102 - Intro to Engineer Comp Apps		3
Year Total:	16	17

Sophomore Year	Credits	
	Fall	Spring
CHMY 211 - Elements of Organic Chemistry & CHMY 212 - Elements of Organic Chemistry Lab	5	
M 273 - Multivariable Calculus	4	
PHSX 220 - Physics I with Calculus	4	
ECHM 201 - Material and Energy Balances for Chemical & Biological Processes	4	
ECHM 321 - Chemical Engineering Fluid Mechanics Operations		3
EMAT 251 - Materials Structures and Prop		3
M 274 - Introduction to Differential Equation		4
PHSX 222 - Physics II with Calculus		4
Univ Core Electives (IA, IH, IS or D)		3
Year Total:	17	17

Junior Year	Credits	
	Fall	Spring
ECHM 307 - Chem Engin Thermodynamics I	3	
ECHM 322 - Chemical Engineering Heat Transfer Operations	3	
EGEN 350 - Applied Engineering Data Analysis	2	
Technical Electives ^{At least 3 credits must be in the CHMY or BCH rubric}	5	
Univ Core Electives (IA, IH, IS or D)	3	
EBIO 438 - Bioprocess Engineering		3
EGEN 310R - Multidisciplinary Engineering Design		3
ECHM 328 - Chemical Engineering Reactor Design		3
Technical Electives		3

ECHM 323 - Chemical Engineering Mass Transfer Operations	3	
Year Total:	16	15

Senior Year	Credits	
	Fall	Spring
ECHM 411R - Chemical Engineering Design I	3	
ECHM 442 - Chem Engin Laboratory I or EBIO 442 - Bioengineering Lab I	3	
ECHM 407 - Chem Engin Thermodynamics II	2	
ECHM 424 - Transport Analysis	3	
Technical Electives	4	
ECHM 412R - Chemical Engineering Design II		3
ECHM 451 - Chemical Engineering Process Dynamics and Control		3
CHMY 373 - Physical Chemistry - Kinetics and Thermodynamics		3
EGEN 488 - Fundamentals of Engineering Exam		0
ECHM 443 - Chem Engin Laboratory II		3
Technical Electives		3
Year Total:	15	15
Total Program Credits:		128

A minimum of 128 credits is required for graduation; 42 of which must be in courses numbered 300 and above.