

# Chemical Engineering Bachelor's Degree

Suggested 4-year program plan



YEAR	First semester	16 credits	Second semester	16 credits		
1	CHEM 202	Accelerated Chemistry	3 hours	CHBE 121	ChBE Profession	1 hour
	CHEM 203	Accelerated Chemistry Lab	2 hours	CHEM 204	Accelerated Chemistry II	3 hours
	MATH 221	Calculus I	4 hours	CHEM 205	Accelerated Chemistry II Lab	2 hours
	RHET 105	Composition I	4 hours	MATH 231	Calculus II	3 hours
	ENG 100	Engineering Orientation	0 hours	PHYS 211	Intro to Phys - Mechanics	4 hours
		General Electives	3 hours	CS 101	Intro to Computing for Engineering	3 hours
2	CHBE 221	Principles of Chemical Engineering	3 hours	CHBE 321	Chem. Engineering Thermodynamics	4 hours
	CHEM 236	Fundamental Organic Chemistry	4 hours	CHBE 421	Momentum and Heat Transfer	4 hours
	CHEM 237	Structure and Synthesis	2 hours	CHEM 436	Fundamental Organic Chemistry II	3 hours
	MATH 241	Calculus III	4 hours	MCB 450	Introductory Biochemistry*	3 hours
	PHYS 212	Electricity & Magnetism	4 hours	MATH 285	Introduction to Differential Equations	3 hours
				MATH 415	Applied Linear Algebra	3 hours
			MATH 257	Linear Algebra w/ Comp. Applications	3 hours	
			PHYS 214	Quantum Physics	2 hours	
				Technical/General Electives	3 hours	
*For Biomolecular Engineering concentration take MCB 450						
3	CHBE 321	Thermodynamics	4 hours	CHBE 422	Mass Transfer Operations	4 hours
	CHBE 421	Momentum and Heat Transfer	4 hours	CHBE 424	Chemical Reaction Engineering	3 hours
	CHEM 442	Physical Chemistry	4 hours		Technical/General Electives	10 hours
	CHEM 420	Instrumental Characterization	2 hours			
	CHEM 315	Instrumental Chemical Systems Lab	2 hours			
	IE 300	Analysis of Data	3 hours			
4	CHBE 430	Unit Operations Laboratory	4 hours	CHBE 430	Unit Operations Laboratory	4 hours
	CHBE 431	Process Design	4 hours	CHBE 431	Process Design	4 hours
	CHBE 440	Process Control and Dynamics	3 hours		Technical/General Electives	10 hours
		Technical/General Electives	9 hours			

CHEM courses

CHBE courses

Other courses

Contact [scs-advising@illinois.edu](mailto:scs-advising@illinois.edu) with any questions.