

Chemical Engineering Bachelor's Degree

Suggested four-year program plan



YEAR 1	First semester		≤ 16 credits	Second semester		16 credits
	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	1 hours	PHYS 211	Intro to Phys - Mechanics	4 hours
		General Education/Electives	1-3 hours	CS 101	Intro to Computing for Engineering	3 hours
YEAR 2	First semester		17 credits	Second semester		18 credits
	CHBE 221	Principles of Chemical Engineering	3 hours	CHBE 321	Chem. Engineering Thermodynamics	4 hours] OR
	CHEM 236	Fundamental Organic Chemistry	4 hours	CHBE 421	Momentum and Heat Transfer	4 hours] OR
	CHEM 237	Structure and Synthesis	2 hours	CHEM 436	Fundamental Organic Chemistry II	3 hours] OR
	MATH 241	Calculus III	4 hours	MCB 450	Introductory Biochemistry*	3 hours] OR
	PHYS 212	Electricity & Magnetism	4 hours	MATH 285	Introduction to Differential Equations	3 hours] OR
				MATH 415	Applied Linear Algebra	3 hours] OR
				MATH 257	Linear Algebra w/ Comp. Applications	3 hours] OR
				PHYS 214	Quantum Physics	2 hours] OR
					Technical/General Electives	3 hours] OR
					*For Biomolecular Engineering concentration take MCB 450	
YEAR 3	First semester		15 credits	Second semester		17 credits
	CHBE 321	Thermodynamics	4 hours] OR	CHBE 422	Mass Transfer Operations	4 hours
	CHBE 421	Momentum and Heat Transfer	4 hours] OR	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			
YEAR 4	First semester		16 credits	Second semester		16 credits
	CHBE 430	Unit Operations Laboratory	4 hours] OR	CHBE 430	Unit Operations Laboratory	4 hours] OR
	CHBE 431	Process Design	4 hours] OR	CHBE 431	Process Design	4 hours] OR
	CHBE 440	Process Control and Dynamics	3 hours		Technical/General Electives	12 hours
		Technical/General Electives	9 hours			



CHEM courses



CHBE courses



Other courses

Contact scs-advising@illinois.edu with any questions.