

Chemical Engineering - Biological Engineering Track

Freshman Year Fall Semester			Hours
CHGN121	Principles of Chemistry I		4
CSM101	Freshman Success Seminar		0.5
EPIC151	Design I		3
LAIS100	Nature and Human Values		4
MATH111	Calculus for Scientists and Engineers I		4
PAGNxxx	Physical Education I		0.5
			16

Freshman Year Spring Semester			Hours
CBEN110	Fundamentals of Biology I		4
CHGN122	Principles of Chemistry II		4
MATH112	Calculus for Scientists and Engineers II		4
PAGNxxx	Physical Education II		0.5
PHGN100	Physics I		4.5
			17

Sophomore Year Fall Semester			Hours
CBEN210	Introduction to Thermodynamics		3
CHGN221	Organic Chemistry I		3
CHGN223	Organic Chemistry I Lab		1
MATH213	Calculus for Scientists and Engineers III		4
PAGNxxx	Physical Education III		0.5
PHGN200	Physics II		4.5
			16

Sophomore Year Spring Semester			Hours
CBEN200	Computational Methods in ChEN		3
CBEN201	Mass and Energy Balances		3
CHGN222	Organic Chemistry II		3
EBGN201	Principles of Economics		3
MATH225	Differential Equations		3
PAGNxxx	Physical Education IV		0.5
			15.5

Junior Year Fall Semester			Hours
CBEN307	Fluid Mechanics		3
CBEN357	Chemical Engineering Thermodynamics		3
CHGN428	Biochemistry		3
LAIS200	Human Systems		3
CBEN358	Chemical Engineering Thermo Lab		1
FREE	Free Elective 1		3
			16

Junior Year Spring Semester			Hours
CBEN314	Heat & Mass Transfer		4
CBEN403	Process Dynamics and Control		3
CBEN375	Chemical Engineering Separations		3
CBEN360	Bioprocess Engineering		3
LAIS/EBGN	H&SS Restricted Elective I		3
			16

Summer Field Session			Hours
CBEN312/313	Unit Operations Lab		6

Senior Year Fall Semester			Hours
CBEN418	Reaction Engineering		3
CBEN402	Chemical Engineering Design		3
CHGN351	Physical Chemistry I		4
LAIS/EBGN	H&SS Restricted Elective II		3
TECH	Technical Elective		1
BIO TECH	Bio Technical Elective		3
			17

Senior Year Spring Semester			Hours
CBEN4XX*	Chemical Engineering Elective (≥400)		3
BIO TECH	Bio Technical Elective		3
LAIS/EBGN	H&SS Restricted Elective II		3
FREE	Free Elective 2		3
FREE	Free Elective 3		3
			15

* Not all CBEN courses count as CBEN electives. A list of courses that satisfy this elective is available in the department office.
BOLD are courses required for the Biological Engineering Track