

Chemical and Biological Engineering (2024)

for International Students only

	Course Code	Course Title	Credits (Hour)	Remarks	
General Education (19 credits)	GELI005, GELI007	Exploration of the Academic World I (005 domestic student, 007 international student)	3(3)		
	GEWR002	Writing	3(3)		
	IFLS800	Academic English I	2(2)		
	GEK5007 GEK5008	[CAREER-ENTREPRENEURSHIP] Freshman Seminar I [CAREER-ENTREPRENEURSHIP] Freshman Seminar II	1(1) 1(1)		
	GECT002	[CAREER-ENTREPRENEURSHIP] Fundamentals of Software Programming	3(3)		
	GECT003	[CAREER-ENTREPRENEURSHIP] Data Science and Artificial Intelligence	3(3)		
	GEBT001	[CAREER-ENTREPRENEURSHIP] The World of Biological science	3(3)		
Major-Related General Education (25 credits)	MATH 161	Calculus with Lab I	3(4)		
	MATH 162	Calculus with Lab II	3(4)		
	PHYS 151	General Physics I	3(3)		
	PHYS 161	General Physics Laboratory I	1(3)	Choose 1	
	EGRN 127	Basic Engineering Virtual Lab I	1(3)		
	PHYS 152	General Physics II	3(3)		
	PHYS 162	General Physics Laboratory II	1(3)	Choose 1	
	EGRN 128	Basic Engineering Virtual Lab II	1(3)		
	CHEM 151	General Chemistry I	3(3)		
	CHEM 153	General Chemistry Laboratory I	1(3)	Choose 1	
	EGRN129	Basic Engineering Virtual Lab III	1(3)		
	CHEM 152	General Chemistry II	3(3)		
	CHEM 154	General Chemistry Laboratory II	1(3)	Choose 1	
	EGRN130	Basic Engineering Virtual Lab IV	1(3)		
MAJOR	CHBE153	Introduction to Computing and Informatics for CBE	3(4)		
	EGRN241	Fundamentals of Data Science	3(3)	Choose 1	
	LIBS 150	Life Sciences	3(3)		
	Required (31 credits)	CHBE222	Introduction to Chemical and Biological Engineering	2(3)	
		CHBE223	Organic Chemistry I	3(3)	
		CHBE224	Chemical Engineering Thermodynamics	3(3)	Physical Chemistry
		CHBE205	Biotechnology	3(3)	
		CHBE210	Fluid Mechanics	3(3)	
		CHBE207	Physical Chemistry	3(3)	
		CHBE211	Engineering Mathematics I	3(3)	
		CHBE323	Heat & Mass Transfer	3(3)	
		CHBE327	Reaction Engineering	3(3)	
		CHBE372	Chemical and Biological Engineering Laboratory I	2(4)	
CHBE471	Chemical and Biological Engineering Laboratory II	2(4)			
CHBE345	Methodology and Trends in Chemical and Biological Engineering	1(2)			
Intensive Advanced (9 credits)	CHBE310	Separation Process	3(3)	Chemical Engineering Thermodynamics	
	CHBE320	Process Control	3(3)	Engineering Mathematics I	
	CHBE321	Bioprocess Engineering	3(3)	Biotechnology	
Major Elective			32		
Courses	This remaining 14 credits can be fulfilled from any courses regardless of whether it is General Education or Major.		14		
Subtotal			130		

● Credits Required in Major

Courses		First Major	Intensive Major	Double Major	Dual Major	General Transfer	Undergraduate Transfer
Basic Course	Required	31	31	31	31	Assinged Required Credits	31
Advanced Course	Intensive Advanced	11	9	11	9		9
	Elective		32		17		32
Total Credits in CHBE		42	72	42	57		72

● Students must earn at least 1 credit form "Department Seminar I ,II"

● Students must take "Human Rights and Gender Equality" 4 times

● Minimum Total Credits : 130

● Students pursuing Intensive Major must submit Graduation Thesis

● International students who entered in or after 2018 are exempt from those three graduation requirements below.

- Acquirement of public English proficiency test score
- Acquirement of public Korean proficiency test score
- Completion of 5 courses lectured in English