

Chemical and Biological Engineering (2016)

		Course Code	Course Title	Credits (Hour)	Remarks
General Education (10 credits)		GETE011	Thinking and Writing I	2(2)	
		GETE014	Thinking and Writing II	2(2)	
		IFLS003	Academic English I	2(4)	
		IFLS004	Academic English II	2(4)	
		GEKS001	Freshman Seminar	1(1)	
		GEKS002	Freshman Seminar	1(1)	
Core General Education (9 credits)	Ethics & Ideas	GECE		3(3)	Choose 3
	Literature & Art	GELA		3(3)	
	World Cultures	GEFC		3(3)	
	Historical Investigation	GEHI		3(3)	
	Quantitative Research	GEQR		3(3)	
	Sociological Studies	GESO		3(3)	
	Science & Technology	GEST		3(3)	
Major-Related General Education (25 credits)		MATH 161	Calculus with Lab I	3(4)	Choose 1
		MATH 162	Calculus with Lab II	3(4)	
		PHYS 151	General Physics I	3(4)	
		PHYS 161	General Physics Laboratory I	1(3)	
		PHYS 152	General Physics II	3(4)	
		PHYS 162	General Physics Laboratory II	1(3)	
		CHEM 151	General Chemistry I	3(4)	
		CHEM 153	General Chemistry Laboratory I	1(3)	
		CHEM 152	General Chemistry II	3(4)	
		CHEM 154	General Chemistry Laboratory II	1(3)	
		EGRN 151	Computer Languages Lab	3(4)	
		LIBS 150	Life Sciences	3(3)	
		General Elective (Designated in a relation to Business School Course)		EGRN 111	
EGRN 200	Economic Investment Decision Analysis				
IMEN 204	General Accounting and Cost Accounting				
BUSS 205	Marketing Management				
BUSS 207	Financial Management				
BUSS 211	Introduction to Operations Management				
BUSS 246	Management Science				
BUSS259	New Venture Creation and Management				
BUSS 311	Organizational Behavior				
BUSS 313	International Business				
BUSS 152	Principles of Accounting				
BUSS 215	Introduction to Management Information Systems				
BUSS 402	Management Strategy				
BUSS 333	International Production, Purchasing and R&D Management				
BUSS 407	New Product Development and Marketing				
SPGE 207	Innovation Trend & Business Model Design				
General Elective (others)				This remaining 8 credits can be fulfilled from any courses regardless of whether it is General Education or Major.	
Subtotal				58	

		Course Code	Course Title	Credits (Hour)	Prerequisite Course
Major Required (30 credits)		CHBE222	Introduction to Chemical and Biological Engineering	2(3)	
		CHBE223	Organic Chemistry I	3(3)	
		CHBE224	Chemical Engineering Thermodynamics	3(3)	
		CHBE205	Biotechnology	3(3)	
		CHBE206	Fluid Mechanics	3(4)	
		CHBE207	Physical Chemistry	3(3)	
		CHBE209	Engineering Mathematics I	3(3)	
		CHBE228	Chemical and Biological Engineering Laboratory I	1(3)	
		CHBE301	Heat & Mass Transfer	3(4)	
		CHBE303	Reaction Engineering	3(4)	
		CHBE331	Chemical and Biological Engineering Laboratory II	1(3)	
		CHBE332	Chemical and Biological Engineering Laboratory III	1(3)	
		CHBE345	Methodology and Trends in Chemical and Biological Engineering	1(2)	
		Major Elective (Intensive Advanced) (12 credits)		CHBE304	Separation Process
CHBE306	Process Control			3(4)	Chemical Engineering Thermodynamics
CHBE321	Bioprocess Engineering			3(3)	Biotechnology
CHBE426	Process and Product Design			3(4)	

● Credits Required in Major

Courses		First Major	Intensive Major	Double Major	Dual Major	Minor	General Transfer	Undergraduate Transfer
Basic Course	Required	30	30	30	30	30	Assinged Required Credits	30
Advanced Course	Intensive Advanced	12	12	12	12	12		12
	Elective		30	12	15	—		30
Total Credits in CHBE		42	72	42	57	42		72

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

● Minimum Total Credits : 130

● Completion of 5 Courses lectured in English (Undergraduate Transfer : 3 Courses)

● Acquirement of Public English Proficiency Test Score

TOEIC	TOEFL			TOSEL	TEPS	IELTS
	PBT	CBT	IBT			
650	530	193	70	498	556	5.5

● Acquirement of Public Korean Proficiency Test Score (TOPIC level 4 or above) : International Students only

● Students pursuing Intensive Major must submit Graduation Thesis