CHEMICAL ENGINEERING CURRICULUM 2017-18 with BIOMOLECULAR ENG. CONCENTRATION

Freshman Year

Fall Semester		Spring Semester	
ENGR 1050 Engr Disciplines & Skills I	1	CHE 1300 Intro to Chemical Eng.	3
ENGR 1060 Engr Disciplines & Skills II	1	CH 1020 General Chemistry	4
CH 1010 General Chemistry	4	MATH 1080 Calc of One Variable II	4
ENGL 1030 Accelerated Composition	3	PHYS 1220 Physics with Calculus I	3
MATH 1060 Calculus of One Variable I	4	Arts and Humanities/Social Science[1]	3
Arts and Humanities/Social Science[1]	3	*Semester Totals:*	*17*
Semester Totals:	*16*		

Optional Summer Semester

CHE 1300 Intro to Chemical Eng. (online) 3

Sophomore Year

CHE 2110 Mass and Energy Balances	4	CHE 2200 Chem Engr Thermodynamics I	3
CH 2230 Organic Chemistry	3	CHE 2300 Fluids/Heat Transfer	4
MATH 2060 Calc of Several Variables	4	CH 2240 Organic Chemistry	3
BIOL 1100 Prncpls of Biology (w/Lab)	5	CH 2290 Organic Chemistry Lab	1
Arts and Humanities/Social Science[1]	3	MATH 2080 Intro to Ord Diff Eqns	4
Semester Totals:	*19*	*Semester Totals:*	*15*

Junior Year

CHE 3210 Chem Eng Thermodynamics II	3	CHE 3070 Unit Operations Lab I	3
CHE 3300 Mass Transfer/Separations	4	CHE 3190 Engineering Materials	3
PHYS 2210 Physics with Calculus II	3	BIOL 4340 Biochemistry Lab	2
Biochemistry Requirement[2]	3	BMOL 4250 Biomolecular Engr	3
STAT 4110 Statistical Methods	3	BIOE 3020 Biomaterials	3
Semester Totals:	*16*	Arts and Humanities/Social Science[1]	3
		Semester Totals:	*17*

Optional Summer Semester

CHE 3070 Unit Operations Lab I	3
CHE 3210 Chem Eng Thermodynamics II	3
CHE 3300 Mass Transfer/Separations	4

Senior Year

CHE 4070 Unit Operations Lab II	3	CHE 3530 Process Dynamics/Control	3
CHE 4310 Chemical Process Design I	3	CHE 4330 Process Design II	3
CHE 4430 Safety, Env. & Prof. Prac. I	2	CHE 4440 Safety, Env. & Proc. Prac. II	1
CHE 4500 Chemical Reaction Engr	3	BMOL 4290 Bioprocess Engineering	3
BCHM 4310 Physical Biochemistry	3	Arts and Humanities/Social Science[1]	3
Arts and Humanities/Social Science[1]	3	Engineering Requirement[3]	3
Semester Totals:	*17*	*Semester Totals:*	*16*

Total: 133 Hours

Notes:

[1] See Policy on Social Sciences and Humanities for Engineering Curricula. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society Requirements.

[2] Select from BCHM 3010, BCHM 3050, BCHM 4230, or CH 3600

[3] Select from CHE 4010 or BMOL 4030, BMOL 4270, BE 4280 or 4350, BIO 4400, 4490 or 4760, or MICR 4130

Note: No student may exceed two attempts, including a *W*, to complete successfully any CHE course.