

BIOENGINEERING OPTION IN CHEMICAL ENGINEERING SUGGESTED DEGREE PROGRAM SEQUENCE (138 CREDIT HOURS REQUIRED)

FRESHMAN YEAR

<i>First Semester</i>	<i>Fall</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Spring</i>	<i>Hours</i>
MATH 1124	Calculus I	4	MATH 2024	Calculus II	4
GNEG 1121	Engr. Appl. Lab II for Math	1	GNEG 1121	Engr. Appl. Lab III for Math	1
CHEG 1011 & 1021	Introduction to Chemical Engineering & Lab	2	CHEM 1034	Chemistry for Engineers	4
ELEG 1043	Computer Appl. in Engineering	3	CHEM 1021	Inorganic Chemistry Laboratory II	1
ENGL 1123	Freshman Composition I	3	PHYS 2513	University Physics I	3
SPCH 1003	Fund. of Speech Communication	3	PHYS 2511	General Physics Lab I	1
			ENGL 1143	Technical Writing	3
Total		16	Total		17

SUMMER SESSIONS

<i>First Term</i>	<i>Hours</i>	<i>Second Term</i>	<i>Hours</i>
POSC 1113 American Government I	3	HIST 1313 U.S. to 1876	3
		Total	6

SOPHOMORE YEAR

<i>First Semester</i>	<i>Fall</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Spring</i>	<i>Hours</i>
CHEG 2013	Materials Science	3	CHEG 2053	Material and Energy Balances	3
CHEG 2043	Chemical Engr. Thermo. I	3	CHEM 2043	Organic Chemistry II	3
CHEM 2033	Organic Chemistry I	3	ELEG 2053	Introduction to Elect. Engineering	3
PHYS 2523	University Physics II	3	CVEG 2454	Statics and Dynamics	4
PHYS 2521	General Physics Lab II	1	CHEG 2003 ⁺	Economic Analysis and Technical Applications	3
MATH 2043	Differential Equations	3			
Total		16	Total		16

SUMMER SESSIONS

<i>First Semester</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Hours</i>
*CHEG 2156 Chemical Engineering Internship I	6	HIST 1323 The U.S.-1876 to Present	3
Total	6	Total	3

JUNIOR YEAR

<i>First Semester Fall</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Spring</i>	<i>Hours</i>
CHEG 3053 Chemical Engin. Thermodynamics II	3	CHEG 3063 Chem. React. Kin./Reactor Design		3
CHEG 3013 Heat, Mass, and Momentum Trans.	3	CHEG 3043 Equilibrium Staged Sep. Processes		3
CHEG 3023 Unit Operations	3	MATH 3685 Mathematics for Engineers		5
CHEM 3413 Physical Chemistry I	3	CHEG 3153 Introduction to Bioengineering		3
Biology for Engineers ⁺	3	Humanities or Visual/Performing Arts Elective		3
Total	15	Total		17

SUMMER SESSIONS

<i>First Semester</i>	<i>Hours</i>
*CHEG 3156 Chemical Engineering Internship II	6
Total	6

SENIOR YEAR

<i>First Semester</i>	<i>Fall</i>	<i>Hours</i>	<i>Second Semester</i>	<i>Spring</i>	<i>Hours</i>
CHEG 3051 Professional Engineering I		1	CHEG 4031 Chemical Engineering Lab III		1
CHEG 4043 Process Design and Analysis		3	CHEG 4483 Senior Design and Professionalism II <i>with bioengineering design topic</i>		3
CHEG 4033 Proc. Dynamics and Control		3	Bioengineering Technical Elective		3
CHEG 4473 Senior Design and Professionalism I <i>with bioengineering design topic</i>		3	Social or Other Behavioral Science Elective		3
CHEG 4011 Chemical Engineering Lab II		1	Visual and Performing Arts Elective		3
CHEM 4033 Biochemistry		3	POSC 1123 American Government II		3
CHEM 4042 Biochemistry Lab		2			
Total		16	Total		16

* Course may be taken for credit during a summer internship, but is not required in degree plan.

** Taking one of the following courses will satisfy this requirement: CHEM 2032, 2042, 3422, 3432, 4042, or 4052. Note that course pre- and co-requisites must also be satisfied.

*** Taking one of the following courses will satisfy this requirement: CHEM 3423, 4023, 4033, 4053, 4063, or 4073. Note that course pre- and co-requisites must also be satisfied.

⁺Course must be approved by the department.