CHEMICAL ENGINEERING

Department of Chemical and Biochemical Engineering

Sample Four-Year Plan

First Year

1st Semester		sh	2nd Semester		sh
ALL	**RHET:1030 Rhetoric**	4	ALL	**MATH 1560 Math II: Multivariable Calculus** *(P: MATH:1550)*	4
F/S	**MATH:1550 Math I: Single Variable Calculus** *(P: ALEKS score ≥ 75 or MPT Level 3 score ≥ 9)*	4	ALL	**MATH:2550 Math III: Matrix Algebra** *(P: MATH:1550)*	2
ALL	**CHEM:1110 Principles of Chemistry I** *(P: ALEKS score ≥ 55 or MPT Level 3 score ≥ 9)*	4	ALL	**CHEM:1120 Principles of Chemistry II** *(P: CHEM:1110 with a minimum grade of C-)*	4
F	**ENGR:1100 Intro to Engineering Problem Solving**	3	ALL	**PHYS:1611 Introductory Physics I / Lab** *(C: MATH:1550)*	4
F	**ENGR:1000 Engineering Success for First-Year Students** *(First semester standing)*	1	F/S	**ENGR:1300 Intro to Engineering Computing** *(C: MATH:1550)*	3
			S	**CBE:1000 CBE Departmental Seminar**	1
		16			**18**

Second Year

3rd Semester		sh		4th Semester		sh
ALL	**General Education Course**	3		ALL	**General Education Course**	3
ALL	**MATH:2560 Math IV: Differential Equations** *(P: MATH:1560, MATH:2550)*	3		ALL	**Elective:** Statistics **CBE:3020** or **STAT:2020** *(P: MATH:1560)* or **STAT:3510**	3
ALL	**CHEM:2210 Organic Chemistry I** *(P: CHEM:1120 with a minimum grade of C-)*	3	**OR**	ALL	**CHEM:2220 Organic Chemistry II** *(P: CHEM:2210 or CHEM:2230 with a minimum grade of C-)*	3
F	**CHEM:2230 Organic Chemistry I for Majors** *(P: CHEM:1120 with a minimum grade of C-)*	3		S	**CHEM:2240 Organic Chemistry II for Majors** *(P: CHEM:2210 or CHEM:2230 with a minimum grade of C-)*	3
F	**CBE:2110 Computational Tools for Chemical Engineers** *(P: MATH:1550; C: MATH:1560)*	2	**OR**	ALL	**CHEM:2410 Organic Chemistry Laboratory** *(P: CHEM:1120 & (CHEM:2210 or CHEM:2230), both with a minimum grade of C-; C: CHEM:2220 or CHEM:2240)*	3
				S	**CHEM:2420 Organic Chemistry Lab for Majors** *(P: CHEM:1120 & (CHEM:2210 or CHEM:2230), both with a minimum grade of C-; C: CHEM:2220 or CHEM:2240)*	3
ALL	**ENGR:2130 Thermodynamics** *(P: CHEM:1110 & PHYS:1611; C: MATH:1560)*	3		S	**CBE:3105 ChE Thermodynamics** *(P: ENGR:2130 & CBE:2110; C: CBE:2105)*	3
F/S	**CBE:2105 Material and Energy Balances** *(P: MATH:1550)*	3		S	**CBE:3109 Fluid Flow** *(C: CBE:2105)*	2
				F/S	**CBE:3000 CBE Professional Seminar** *(P: CBE:2105)*	1
		17				**18**

Third Year

5th Semester		sh	6th Semester		sh
ALL*	**ENGR:2720 Materials Science** *(P: CHEM:1110; C:MATH:1550)*	3	ALL	**General Education Course**	3
ALL	**Elective:** Free	3	F/S	**CBE:3120 Chemical Reaction Engineering** *(P: MATH:2560; C: CBE:3105; R: CBE:3113)*	3
F	**CBE:3113 Heat & Mass Transfer** *(P: MATH:2560 & CBE:2105; R: CBE:3109)*	3	S	**CBE:3150 Thermodynamics / Transport Laboratory** *(P: CBE:3105 & CBE:3113)*	3
F	**CBE:3125 Chemical Process Safety** *(P: CBE:3105 & CBE:3109; C: CBE:3113)*	3	S	**CBE:3205 introduction Biochemical Engineering** *(P: CBE:2105; C: CBE:3109; R: CBE:3120)*	3
F	**CBE:3117 Separations** *(P: CBE:2105 & CBE:3105; C: CBE:3113)*	3	F/S	**Elective:** Focus Area	3
F/S	**CBE:3000 CBE Professional Seminar** *(P: CBE:2105)*	1	F/S	**CBE:3000 CBE Professional Seminar** *(P: CBE:2105)*	1
		16			**16**

Fourth Year

7th Semester		sh	8th Semester		sh
F	**CBE:3155 Chemical Reaction Engineering / Separation Lab** *(P: CBE:3117; C: CBE:3120; R: statistics elective)*	3	ALL	**General Education Course**	3
F/S	**CBE:3000 CBE Professional Seminar** *(P: CBE:2105)*	1	ALL	**General Education Course**	3
F	**CBE:4105 Process Dynamics & Control** *(P: MATH:2560, CBE:2105, & CBE:3109; C: CBE:3120)*	3	S	**CBE:4110 Chemical Engineering Process Design II** *(P: CBE:4109; R: CBE:4105 & CBE:3205)*	3
F	**CBE:4109 Chemical Engineering Process Design I** *(P: CBE:3109, CBE:3113, & CBE:3117; C: CBE:3120 & CBE:3125)*	2	F/S	**Elective:** Advanced Science	3
F	**Elective:** Advanced Chemistry	3	F/S	**Elective:** Focus Area	3
ALL	**Elective:** Focus Area	3	S	**CBE:4195 Senior Enriching Activities Seminar** *(C: CBE:4110)*	0
ALL	**Elective:** Focus Area	3			
		18			**15**