

# CHEMICAL ENGINEERING Biochemical Engineering MAJ ORG SEQ

1 <sup>st</sup> Year	Session	Course	Course Name	SH	P: Prerequisite; C: Coreq; R: Recommend
	F/S	Math 1550	Engineering Math I: Single Variable Calculus	4	P: HS Algebra & Trigonometry; Score of 80 on ALEKS
	F	ENGR:1100	Engineering Problem Solving I	3	
	ALL	CHEM:1110	Principles of Chemistry I	4	
	ALL	RHET:1030	Rhetoric	4	
	F	ENGR:1000	Engr Success for First Year Students	1	First Semester Standing
<b>Total</b>				<b>16</b>	
	F/S	MATH1560	Engineering Math II: Multi-Variable Calculus	4	P: MATH 1550
	F/S	ENGR:1300	Engineering Problem Solving II	3	C: MATH:1550
	ALL	PHYS:1611	Introductory Physics I	4	C: MATH:1550
	ALL	MATH:2550	Engineering Math III: Matrix Algebra	2	P: MATH:1550
	ALL	CHEM:1120	Principles of Chemistry II	4	P:CHEM:1100
	S	CBE:1000	CBE Departmental Seminar	0	
<b>2<sup>nd</sup> Year</b>				<b>TOTAL</b>	<b>17</b>
	ALL	MATH2560	Engineering Math IV: Differential Equations	3	P:MATH:1560; MATH 2550
	ALL		General Education Component #1	3	
	ALL	ENGR:2110	Engineering Fundamentals I:Statics	2	P:MATH:1550 C:MATH1560; C:PHYS:1611
	ALL	ENGR:2130	Engineering Fundamentals III: Thermodynamics	3	P:CHEM:1110; PHYS:1611;C:MATH:1560
	F	CHEM:2230	Organic Chemistry I For Majors	3	CHEM:1120
	ALL	CBE:2105	Process Calculations	3	P:MATH:1550
<b>Total</b>				<b>17</b>	
	S	CBE:3105	ChE Thermodynamics	3	P:ENGR:2130; C: CBE:2105
	S	CBE:3110	Engineering Flow and Heat Exchange	3	C:CBE:2105
	S	CHEM:2240	Organics Chemistry II for Majors	3	
	S	CHEM:2420	Organic Chemistry Lab for Majors	3	
	ALL	STAT:2020	Elective #1: Prob & Stats for Engrg & Phys Sci	3	
	F/S	CBE:3000	CBE Professional Seminar	0	P:CBE:2105
<b>3<sup>rd</sup> Year</b>				<b>Total</b>	<b>15</b>
	F	CBE:3115	Mass Transfer and Separations	3	P:CBE:3105; CBE:3110
	F	CBE:3150	Thermodynamics/Transport Laboratory	3	P:CBE:3105; CBE:3110; C:CBE:3115 R:Statistics Course
	ALL	ENGR:2720	Material Science	3	P:CHEM:1110;C:MATH:1550
	F/S	ENR:2120	Engineering Fundamentals II: Electrical Circuits	3	C:MATH:2560
	ALL		General Education Component #2	3	
	F/S	CBE:3000	CBE Professional Seminar	0	P:CBE:2105
<b>Total</b>				<b>15</b>	
	S	CBE:3120	Chemical Reaction Engineering	3	P:CBE:3115
	S	CBE:3155	Chemical Reaction Engineering/Separation Lab	2	P:CBE:3110; CBE:3150 C:CBE:3120
	S	CBE:3125	Chemical Process Safety	3	P:CBE:3110; CBE:3115; C:CBE:3120
	ALL(odd)		Elective #2: CBE:5210 in even yrs	3	
	ALL		General Education Component #3	3	
	ALL		General Education Component #4	3	
	F/S	CBE:3000	CBE Professional Seminar	0	P:CBE:2105
<b>4<sup>th</sup> Year</b>				<b>Total</b>	<b>17</b>
	F	CBE:4105	Process Dynamics & Control	3	P:CBE:3120
	F	CBE:4109	Chemical Engineering Process Design I	2	P:CBE:3120; CBE:3115
	F	CBE:5205	Introduction to Biochemical Engineering	3	P:CBE:3120
	F		Advanced Chemistry Elective	3	
	ALL		Elective #3: CBE:5210 in even yrs	3	
	ALL		Elective #4: Additional Elective	3	
	F/S	CBE:3000	CBE :Professional Seminar	0	P:CBE:2105
<b>Total</b>				<b>17</b>	
	S	CBE:4110	Chemical Engineering Process Design II	3	P:CBE:4109; R:CBE:4105; CBE:3125
	S(Even)	CBE:5210	Elective #5: Additional Elective	3	
	S		Advanced Science Elective	3	
	S		Elective #6: Additional Elective	3	
	ALL		General Education Component #5	3	
	S	CBE:4195	Senior Enriching Activities Seminar	0	C:CBE:4110
<b>Total</b>				<b>15</b>	