

# CHEMICAL ENGINEERING

## Biomedical Option

<b>FRESHMAN YEAR</b>		
<b>FALL</b>		
C&PE 111	Introduction to the Profession	2
CHEM 184	Foundations of Chemistry I	5
ENGL 101	Composition	3
MATH 121	Calculus I	5
		Total 15 hours
<b>SPRING</b>		
C&PE 121	Introduction to Computers in Engineering	3
CHEM 188	Foundations of Chemistry II	5
ENGL 102	Composition & Literature	3
MATH 122	Calculus II	5
		Total 16 hours

<b>SOPHOMORE YEAR</b>		
<b>FALL</b>		
C&PE 211	Material & Energy Balances	3
CHEM 624	Organic Chemistry I	3
CHEM 625	Organic Chemistry I Lab	2
MATH 220	Applied Differential Equations	3
PHSX 211	General Physics I	4
_____	Humanities or Social Sciences Elective	3
		Total 18 hours
<b>SPRING</b>		
C&PE 221	Basic Engineering Thermodynamics	3
_____	Humanities or Social Sciences Elective	3
MATH 290	Elementary Linear Algebra	2
ENGL _____	Advanced English Elective	3
PHSX 212	General Physics II	4
_____	Engineering Elective	3
		Total 18 hours

<b>JUNIOR YEAR</b>		
<b>FALL</b>		
C&PE 511	Momentum Transfer	3
C&PE 512	Process Engineering Thermodynamics	3
C&PE 522	Economic Appraisal of C&PE Projects	2
CHEM 646	Physical Chemistry I	3
BIOL 100/150	Principles of Molecular and Cellular Biology	3 - 4
_____	Humanities or Social Sciences Elective	3
		Total 17-18 hours
<b>SPRING</b>		
C&PE 521	Heat Transfer	3
C&PE 523	Mass Transfer	4
C&PE 524	Chemical Engineering Kinetics & Reactor Design	3
BIOL 246	Principles of Human Physiology	3
or		
BIOL 646	Mammalian Physiology	4
CHEM 648	Physical Chemistry II	4
		Total 17-18 hours

<b>SENIOR YEAR</b>		
<b>FALL</b>		
C&PE 613	Chemical Engineering Design I	4
C&PE 615	Introduction to Process Dynamics and Control	3
C&PE 616	Chemical Engineering Laboratory I	3
C&PE 656	Introduction to Biomedical Engineering	3
BIOL 600/636	Introductory Biochemistry	3 - 4
		Total 16-17 hours
<b>SPRING</b>		
C&PE 623	Chemical Engineering Design II	2
C&PE 624	Plant & Environmental Safety	3
C&PE 626	Chemical Engineering Laboratory II	3
C&PE 651	Undergraduate Problems (or Engineering Elective)	3
_____	Engineering Elective	3
_____	Humanities or Social Sciences Elective	3
		Total 17 hours

134 credit hours required for graduation

Revised October 2008 (KVC)