

CHEMICAL ENGINEERING 128-HOUR CURRICULUM WORKSHEET

Biomolecular Engineering Concentration

FRESHMAN YEAR							
First Semester		Credit Hours	Grade Earned	Second Semester		Credit Hours	Grade Earned
CHE 1101	CHE Freshman Seminar*	1		CHE 2213	CHE Analysis**	3	
CH 1213	Fund. of Chemistry	3		CH 1223	Fund. of Chemistry	3	
CH 1211	Inv. in Chemistry	1		CH 1221	Inv. in Chemistry	1	
MA 1713	Calculus I	3		MA 1723	Calculus II	3	
BIO 1134	Biological Sciences I	4		PH 2213	Physics I	3	
EN 1103	English Comp. I	3		EN 1113	English Comp. II	3	
	Total	15			Total	16	

SOPHOMORE YEAR							
First Semester		Credit Hours	Grade Earned	Second Semester		Credit Hours	Grade Earned
CHE 2114	Mass and Energy Balances*	4		CHE 3113	Thermo I	3	
CHE 3203	Fluid Flow Ops*	3		CH 4523	Organic Chemistry II	3	
CH 4513	Organic Chemistry I	3		CH 4521	Organic Chem Lab II	1	
CH 4511	Organic Chem. Lab I	1		MA 2743	Calculus IV	3	
MA 2733	Calculus III	3			Social Science Elective	3	
BIO 1144	Biological Sciences II	4			Humanities Elective	3	
	Total	18			Total	16	

JUNIOR YEAR							
First Semester		Credit Hours	Grade Earned	Second Semester		Credit Hours	Grade Earned
CHE 3123	CHE Thermo II	3		CHE 3213	Heat Transfer Ops**	3	
CHE 3413	Engineering Materials*	3		CHE 3223	Separations**	3	
MA 3253	Differential Equations	3		CHE 3222	CHE Lab I**	2	
IE 3913	Engineering Economy I	3		BIO 3304	General Microbiology	4	
	Humanities Elective	3		GE 3513	Technical Writing	3	
	Total	15			Total	16	

SENIOR YEAR							
First Semester		Credit Hours	Grade Earned	Second Semester		Credit Hours	Grade Earned
CHE 4113	CHE Reactor Design*	3		CHE 4223	Process Controls**	3	
CHE 4134	CHE Process Design*	4		CHE 4233	CHE Plant Design**	3	
CHE 3232	CHE Lab II*	2		CHE 4633	Process Safety**	3	
BCH 4603	General Biochemistry I (or BCH 4013 Prin. of Biochem)	3		PH 2223	Physics II***	3	
	Adv. Science Elective	3			Fine Arts Elective	3	
					Social Science Elective	3	
	Total	15			Total	18	

* Always taught during fall semester

** Always taught during spring semester

*** Approved substitutes for PH 2223 Physics II are IE 4613 Engineering Stats I, IE 4623 Engineering Stats II and CHE 4313 Transport Phenomena

For students graduating Spring 2015 or later CHE 4633 Process Safety is required.

Advanced Science Elective: Typically a 3000 or 4000 level science course (with advisor approval): However Premed students may choose PH 2233 Physics III (needed for med school entrance); Pre-vet students may need a 3 hour advanced biology course; or, students may choose a 3 hour biotechnology course from an engineering department.