

Recommended Curriculum *for Class of 2012 or earlier*

First Year – First Semester			First Year – Second Semester		
CHB 111	Introduction to Chemical Engineering and Bioengineering I	2	CHB 112	Introduction to Chemical Engineering and Bioengineering II	2
CHY 121	Introduction to Chemistry	3	CHY 122	The Molecular Basis of Chemical Change	3
CHY 123	Introduction to Chemistry Laboratory	1	CHY 124	The Molecular Basis of Chemical Change Laboratory	1
MAT 126	Calculus I	4	MAT 127	Calculus II	4
PHY 121	Physics for Engineers and Physical Scientists I	4	PHY 122	Physics for Engineers and Physical Scientists II	4
	Human Values & Social Context Elective ¹	3	ENG 101	College Composition	3
		17			17
Second Year – First Semester			Second Year – Second Semester		
CHE 200	Fundamentals of Process Engineering	4	CHE 385	Chemical Engineering Thermodynamics I	3
CHY 251	Organic Chemistry I	3	CHB 350	Statistical Process Control and Analysis	3
CHY 253	Organic Chemistry Laboratory I	2	MAT 258	Introduction to Differential Equations with Linear Algebra	4
MAT 228	Calculus III	4	ECE 209	Fundamentals of Electric Circuits	3
BIO 100	Basic Biology	4		Human Values & Social Context Elective ¹	3
		17			16
Third Year – First Semester			Third Year – Second Semester		
CHE 352	Process Control	3	CHB 361	Chemical Eng. and Bioeng. Laboratory I	3
CHE 360	Elements of Chemical Engineering I	4	CHE 362	Elements of Chemical Engineering II	4
MEE 252	Statics and Strength of Materials	3	CHE 368	Kinetics and Reactor Design	3
BMB 300	General Microbiology	3	BMB 322	Biochemistry	3
BMB 305	General Microbiology Laboratory	2	BMB 323	Introductory Biochemistry Laboratory	1
	Human Values & Social Context Elective ¹	3		Approved Technical Elective I ²	3
		18			17
Fourth Year – First Semester			Fourth Year – Second Semester		
CHB 363	Chemical Eng. and Bioeng. Laboratory II	3	BLE 492	Design Project	3
CHB 477	Elements of Chemical Engineering and Bioengineering Design	3		Approved Technical Elective II ²	3
CHB 460	Biochemical Engineering	3		Approved Technical Elective III ²	3
CHB 493	Chemical Eng. and Bioeng. Seminar	0		Human Values & Social Context Elective ¹	3
BLE 492	Design Project	1		Human Values & Social Context Elective ¹	3
	Human Values & Social Context Elective ¹	3			15
		13			

Total Credits Required for Graduation = 130

¹ The **Human Values & Social Context Electives (18 credits)** must be selected to meet the University of Maine General Education requirements. These should be selected from a list of approved courses to satisfy each of the five sub-categories: western cultural tradition, social context and institutions, cultural diversity and international perspectives, population and the environment, and artistic and creative expression. Some courses cover more than one sub-category.

² The **Technical Electives (9 credits)** should be upper level (300 level or higher) engineering, mathematics or science courses. A list of approved courses is available at the Department Office or at <http://www.umche.maine.edu/chb>.