

Recommended Curriculum

for Students Matriculated in Fall 2020 or Later

First Year – First Semester			First Year – Second Semester		
CHE 111	Introduction to Chemical Engineering I	1	CHE 112	Introduction to Chemical Engineering II	3
CHY 121	General Chemistry I	3	CHY 122	General Chemistry II	3
CHY 123	General Chemistry Laboratory I	1	CHY 124	General Chemistry Laboratory II	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 & Soc. Context Elective 1 ¹	3	ENG 101	College Composition	3
		16			18
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	CHE 350	Statistical Process Control and Analysis	3
CHY 253	Organic Chemistry Laboratory I	2	CHY 252	Organic Chemistry II	3
MAT 228	Calculus III	4	MAT 258	Introduction to Differential Equations with Linear Algebra	4
	Human Values & Soc. Context Elective 2 ¹	3		Human Values & Soc. Context Elective 3 ¹	3
		16			16
Third Year – First Semester			Third Year – Second Semester		
CHE 352	Process Control	3	CHE 361	Chemical Engineering Laboratory I	3
CHE 360	Elements of Chemical Engineering I	4	CHE 362	Elements of Chemical Engineering II	4
CHE 386	Chemical Engineering Thermodynamics II	3	CHE 368	Kinetics and Reactor Design	4
ENG 320	Technical Communication for Engineering	3		Technical Elective 1 ²	3
		13			14
Fourth Year – First Semester			Fourth Year – Second Semester		
CHE 363	Chemical Engineering Laboratory II	3	CHE 479	Chemical Engineering Design Projects	3
CHE 475	Process Safety	2	CHE 493	Chemical Engineering Seminar	1
CHE 477	Elements of Chemical Engineering Design	3		Technical Elective 3 ²	3
CHE 478	Analysis, Simulation and Synthesis of Chemical Processes	3		Human Values & Soc. Context Elective 5 ¹	3
CHE 493	Chemical Engineering Seminar	0			10
	Technical Elective 2 ²	3			
	Human Values & Soc. Context Elective 4 ¹	3			
		17			

Total Credits Required for Graduation = 120

¹ The **Human Values & Social Context Electives (15 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. These selected electives (15 credits) and ENG 320 (3 credits) satisfy the 18-credit requirement for University of Maine General Education.

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 <https://umaine.edu/chb/undergraduate-programs/tech-electives/>. Students may also select other courses with approval of the Department Curriculum Committee.

Ethics

The course sequence CHE 477, CHE 479 and CHE 493 satisfies the University of Maine General Education requirements for ethics.