

Sample Honors and Chemical Engineering B.S. Curriculum for Students Matriculated before Fall 2020

First Year – First Semester			First Year – Second Semester		
CHE 111	Introduction to Chemical Engineering I	2	CHE 112	Introduction to Chemical Engineering 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
HON 111	Civilizations I	4	HON 112	Civilizations II	4
		18			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
HON 211	Civilizations III	4	HON 212	Civilizations IV	4
HON 180	A Cultural Odyssey ¹	1			
		18			17
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	3
MEE 252	Statics and Strength of Materials	3	CHY 472	Physical Chemistry II	3
	Approved Advanced Chemistry Elective ²	3	HON 310	Honors Tutorial	3
		16			16
Fourth Year – First Semester			Fourth Year – Second Semester		
CHE 363	Chemical Engineering Laboratory II	3	CHE 479	Chemical Engineering Design Projects	4
CHE 477	Elements of Chemical Engineering Design	3	CHE 493	Chemical Engineering Seminar	1
CHE 478	Analysis, Simulation and Synthesis of Chemical Processes	3	ECE 209	Fundamentals of Electric Circuits	3
CHE 493	Chemical Engineering Seminar	0	HON 499	Honors Thesis ³	3
HON 498	Honors Directed Study	3		Approved Technical Elective II ²	3
	Approved Technical Elective I ²	3			14
		15			

Total Credits Required for Graduation = 132 (130⁴)

¹ HON 180 (A Cultural Odyssey) must be taken for 1 credit at any time during the eight semesters, but is recommended to be taken during the first two years.

² The **Advanced Chemistry Elective (3 credits)** should be an upper level (300 level or higher) chemistry course or chemical engineering or biochemistry course with significant chemistry content. 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/>.

³ HON 499 counts as one technical elective. The Honors thesis may count as a second technical elective on a case-by-case basis. See your advisor before proceeding.

⁴ Total credits required without honors.