# Recommended Curriculum
for Students Matriculated in Fall 2020 or Later

## First Year – First Semester
- **CHE 111** Introduction to Chemical Engineering I 1
- **CHY 121** General Chemistry I 3
- **CHY 123** General Chemistry Laboratory I 1
- **MAT 126** Calculus I 4
- **PHY 121** Physics for Engineers and Physical Scientists I 4
- **Human Values & Soc. Context Elective 1** 3

**Total Credits:** 16

## First Year – Second Semester
- **CHE 112** Introduction to Chemical Engineering II 3
- **CHY 122** General Chemistry II 3
- **CHY 124** General Chemistry Laboratory II 1
- **MAT 127** Calculus II 4
- **PHY 122** Physics for Engineers and Physical Scientists II 4
- **ENG 101** College Composition 3

**Total Credits:** 18

## Second Year – First Semester
- **CHE 200** Fundamentals of Process Engineering 4
- **CHY 251** Organic Chemistry I 3
- **CHY 253** Organic Chemistry Laboratory I 2
- **MAT 228** Calculus III 4
- **Human Values & Soc. Context Elective 2** 3

**Total Credits:** 16

## Second Year – Second Semester
- **CHE 385** Chemical Engineering Thermodynamics I 3
- **CHE 350** Statistical Process Control and Analysis 3
- **CHY 252** Organic Chemistry II 3
- **MAT 258** Introduction to Differential Equations with Linear Algebra 4
- **Human Values & Soc. Context Elective 3** 3

**Total Credits:** 16

## Third Year – First Semester
- **CHE 352** Process Control 3
- **CHE 360** Elements of Chemical Engineering I 4
- **CHE 386** Chemical Engineering Thermodynamics II 3
- **ENG 320** Technical Communication for Engineering 3

**Total Credits:** 13

## Third Year – Second Semester
- **CHE 361** Chemical Engineering Laboratory I 3
- **CHE 362** Elements of Chemical Engineering II 4
- **CHE 368** Kinetics and Reactor Design 4
- **Technical Elective 1** 3

**Total Credits:** 14

## Fourth Year – First Semester
- **CHE 363** Chemical Engineering Laboratory II 3
- **CHE 475** Process Safety 2
- **CHE 477** Elements of Chemical Engineering Design 3
- **CHE 478** Analysis, Simulation and Synthesis of Chemical Processes 3
- **CHE 493** Chemical Engineering Seminar 0
- **Technical Elective 2** 3
- **Human Values & Soc. Context Elective 4** 3

**Total Credits:** 17

## Fourth Year – Second Semester
- **CHE 479** Chemical Engineering Design Projects 3
- **CHE 493** Chemical Engineering Seminar 1
- **Technical Elective 3** 3
- **Human Values & Soc. Context Elective 5** 3

**Total Credits:** 10

**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/](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.

Reviewed: Oct 2020