### Sample Honors and Chemical Engineering B.S. Curriculum

#### First Year – First Semester
- **CHE 111** Introduction to Chemical Engineering I 2
- **CHY 121** Introduction to Chemistry 3
- **CHY 123** Introduction to Chemistry Laboratory 1
- **MAT 126** Calculus I 4
- **PHY 121** Physics for Engineers and Physical Scientists I 4
- **HON 111** Civilizations I 4

18 Credits

#### First Year – Second Semester
- **CHE 112** Introduction to Chemical Engineering II 2
- **CHY 122** The Molecular Basis of Chemical Change 3
- **CHY 124** The Molecular Basis of Chemical Change Laboratory 1
- **MAT 127** Calculus II 4
- **PHY 122** Physics for Engineers and Physical Scientists II 4
- **HON 112** Civilizations II 4

18 Credits

#### 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
- **HON 211** Civilizations III 4
- **HON 180** A Cultural Odyssey 1

18 Credits

#### Second Year – Second Semester
- **CHE 385** Chemical Engineering Thermodynamics I 3
- **CHE 350** Statistical Process Control and Analysis 3
- **CHE 252** Organic Chemistry II 3
- **MAT 258** Introduction to Differential Equations with Linear Algebra 4
- **HON 212** Civilizations IV 4

17 Credits

#### Third Year – First Semester
- **CHE 352** Process Control 3
- **CHE 360** Elements of Chemical Engineering I 4
- **CHE 386** Chemical Engineering Thermodynamics II 3
- **MEE 252** Statics and Strength of Materials 3
- **Approved Advanced Chemistry Elective** 2

16 Credits

#### 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 3
- **CHY 472** Physical Chemistry II 3
- **HON 310** Honors Tutorial 3

16 Credits

#### Fourth Year – First Semester
- **CHE 363** Chemical Engineering Laboratory II 3
- **CHE 477** Elements of Chemical Engineering Design 3
- **CHE 478** Analysis, Simulation and Synthesis of Chemical Processes 3
- **CHE 493** Chemical Engineering Seminar 0
- **HON 498** Honors Directed Study 3
- **Approved Technical Elective** 1

15 Credits

#### Fourth Year – Second Semester
- **CHE 479** Chemical Engineering Design Projects 4
- **CHE 493** Chemical Engineering Seminar 1
- **ECE 209** Fundamentals of Electric Circuits 3
- **HON 499** Honors Thesis 3
- **Approved Technical Elective** 2

14 Credits

**Total Credits Required for Graduation = 132 (130)**

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 [http://umaine.edu/chb](http://umaine.edu/chb).
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.

Reviewed: July 2016