## Chemical Engineering Concentration Model Program (Starting Fall 2021)

### First Year

**Fall (16)**
- ✔ 5 Chemistry 101 or 103 General Chemistry I (F,S)
- ✔ 3 Engineering 101 Intro to Engineering Design (F)
- ✔ 1 Engineering 181 Graphical Communication Lab (F)
- ✔ 4 Mathematics 171 Calculus I (F,S)
- ✔ 3 Core Foundations Community and Commitments

**Spring (16)**
- ✔ 5 Chemistry 102 General Chemistry II (S)
- ✔ 4 Mathematics 172 Calculus II (F,S)
- ✔ 4 Physics 133 Introductory Physics, Mechanics and Gravity (S)
- ✔ 3 Core Comp and Skills Foundational Writing

### Second Year

**Fall (17)**
- ✔ 4 Engineering 209 Introduction to Conservation Laws and Fluid Mechanics
- ✔ 3 Mathematics 270/271 Multivariable Calculus - Math 270 (F only), Math 271 (F,S)
- ✔ 4 Physics 235 Introductory Physics: Electricity and Magnetism (F)
- ✔ 2 Computer Science 104 Applied Computing (F) (CS 106 or 108 may be substituted but both are 4 SH)
- ✔ 3 Core Foundations Foundations of Christianity I
- ✔ 0 Engineering 295 Internship Workshop

**Spring (17)**
- ✔ 4 Engineering 294 Engineering Seminar (does not require registration in advance)

### Third Year

**Fall (18)**
- ✔ 4 Engineering 303 + 303L Chem. Engr. Principles & Thermodynamics (F)
- ✔ 4 Chemistry 241 +241L Organic Chemistry I (F)
- ✔ or 240 + 240L Fund. of Organic Chemistry (F)
- ✔ 4 Chemistry 351 + 351L Physical Chemistry I (F)
- ✔ 2 Core Foundations Foundations of Christianity II
- ✔ 2 Core Knowledge and Understanding (see Core Options sheet) - tagged
- ✔ 1 Core Comp and Skills Health and Movement

**Spring (18)**
- ✔ 4 Engineering 384 Sustainability Analysis (Required for students seeking Sustainability Designation)

### Fourth Year

**Fall (17)**
- ✔ 4 Engineering 331 Kinetics/Reactor Design (F)
- ✔ 4 Engineering 335 Mass Transfer & Staging Operations (F)
- ✔ 2 Engineering 339 Senior Design Project (F) - Core Contemporary Challenges
- ✔ 4 Elective: Advanced Science (2 SH minimum)
- ✔ 2 Business 357 Business Aspects for Engineers (F)
- ✔ 1 Core Comp and Skills Health and Movement

**Spring (16)**
- ✔ 2 Engineering 337 Chemical Engineering Laboratory (S)
- ✔ 4 Engineering 340 Senior Design Project (S)
- ✔ 4 Engineering 342 Process Control (S)
- ✔ 4 Core Knowledge and Understanding (see Core Options sheet) - tagged
- ✔ 2 Core Knowledge and Understanding (see Core Options sheet)
- ✔ 0 Engineering 394 Engineering Seminar (does not require registration in advance)

### Other Requirements
- ✔ 0-8 Core Comp and Skills: World Languages I (3 years in HS with B or better)
- ✔ 0-3 Engaged Citizenship Commitment Tag: Diversity and Difference
- ✔ 0-3 Engaged Citizenship Commitment Tag: Environmental Sustainability
- ✔ 0-3 Engaged Citizenship Commitment Tag: Global Regions and Cultures

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*ENGR 20X - Students must take two out of three of the following courses:
ENGR 204 - Statics and Dynamics
ENGR 205 - Material Science
* Course offered as part of the Summer Program in Germany

* Possibly insert Summer Program in Germany

Pink listings (core humanities courses) may be taken in any semester. ECON should be taken prior to BUS 357.

See University Catalog or Elective Options sheet for courses allowed for the orange and green categories. Classes shaded in light brown are optional.

Revised Feb 2023