# BSE: Civil & Environmental Engineering Concentration Model Program
## (Starting Fall 2023 or Later)

### First Year
- **Fall (16)**
  - 4 Chemistry 101 + 101L: General Chemistry I (F,S)
  - 4 Engineering 101 + 101L: Intro to Engineering Design (F)
  - 4 Mathematics 171: Calculus I (F,S)
  - 2 Core Foundations: CORE 100: Community and Commitments
  - 2 Interdisciplinary 102: Oral Rhetoric for Engineers (or CS 104)

- **Spring (17)**
  - 4 Engineering 205: Principles of Materials Science (S)
  - 4 Mathematics 172: Calculus II (F,S)
  - 4 Physics 133 + 133L: Introductory Physics: Mechanics and Gravity (S)
  - 4 Core Comp and Skills: Foundational Writing (ENGL 101)
  - 1 Core Comp and Skills: Health and Movement (Personal Fitness)

### Second Year
- **Fall (16)**
  - 4 Engineering 20X★
  - 4 Mathematics 271: Multivariable Calculus (F,S)
  - 4 Physics 235 + 235L: Introductory Physics: Electricity and Magnetism (F)
  - 2 Comp Sci 104 + 104L: Applied Computing (F) (CS 106 or 108 may be substituted but both are 4 SH)
  - 2 Core Knowledge and Understanding: (see Core Options sheet)
  - 0 Engineering 295: Internship Workshop

- **Spring (18)**
  - 2 Interdisciplinary 184: Intro to Sustainability Challenges (F) (ES tag, required for Sustainability Designation)

### Third Year
- **Fall (16)**
  - 4 Engineering 305: Mechanics of Materials (F)
  - 4 Engineering 306: Environmental Engineering (F)
  - 4 Engineering 320: Hydraulic Engineering (F)
  - 2 Core Foundations: Foundations of Christianity II
  - 2 Economics (2 SH min) ECON 191 (2) or ECON 233 (4) - ECON 221, 222, or 232 may be added or substituted

- **Spring (17)**
  - 4 Engineering 308: Environmental Engineering Design (S)
  - 4 Engineering 321: Hydraulic Engineering Design (S)
  - 4 Engineering 326: Structural Analysis (S)
  - 4 Engineering Elective
  - 1 Core Comp and Skills: Health and Movement (Leisure, Sport, and Skills)

### Internship Experience (ENGR 385 Optional)

### Fourth Year
- **Fall (18)**
  - 4 Engineering 327: Structural Design (F)
  - 2 Engineering 339: Senior Design Project (F)
  - 4 Elective: Basic Science, Advanced Math, Engineering, or Technical
  - 4 Core Knowledge and Understanding: (see Core Options sheet) - D&D or GR&C tag
  - 2 Core Knowledge and Understanding: (see Core Options sheet)
  - 2 Business 357: Business Aspects for Engineers (F)
  - 1 Interdisciplinary 384: Sustainability Experience (F,S) (Required for students seeking Sustainability Designation)

- **Spring (14)**
  - 4 Elective: Basic Science or Advanced Math (2 SH minimum)
  - 4 Engineering 340: Senior Design Project (S)
  - 4 Engineering Elective (2 SH minimum)
  - 4 Core Knowledge and Understanding: (see Core Options sheet - 26 SH of total K&U minimum) - D&D or GR&C tag
  - 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

Revised Mar 2024

---

*ENGR 20X - These courses are required but can be taken in any order (offered fall and spring):
- ENGR 202★: Statics and Dynamics
- ENGR 204 - Intro to Circuit Anal. and Electronics with Lab
- ENGR 209 - Intro to Cons. Laws & Fluid Mechanics

*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 green, red, orange, blue and purple categories. Classes shaded in light brown are optional.