### Electrical & Computer Engineering Concentration Model Program (Fall 2021 New Core)

#### First Year

**Fall (16)**
- 5 Chemistry 101  General Chemistry (F&S) - Core K&U 1
- 3 Engineering 101  Intro to Engineering Design (F)
- 1 Engineering 181  Engineering Communication Lab (F)
- 4 Mathematics 171  Calculus I (F,S) - Core K&U 2
- 3 Core Foundations  Community and Commitments

**Spring (17)**
- 3 Engineering 205  Material Science (S)
- 4 Mathematics 172  Calculus II (F,S)
- 4 Physics 133  Introductory Physics, Mechanics and Gravity (S) - Core K&U 3
- 3 Core Foundations  Foundations of Christianity I
- 3 Core Comp and Skills  Foundational Writing

#### Second Year

**Fall (17)**
- 4 Engineering 20X ★
- 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 II
- 1 Core Comp and Skills  Health and Movement
- 0 Engineering 295  Internship Workshop
- 1 Engineering 184  Sustainability Challenges (F) (Required for students seeking Sustainability Designation)

**Spring (17)**
- 4 Engineering 20X ★
- 4 Engineering 20X ★
- 4 Mathematics 231  Differential Equations with Linear Algebra (F,S)
- 3 ECON 151/221/232/233  Core K&U 4
- 2 Statistics 241  Engineering Statistics (S)
- 0 Engineering 294  Engineering Seminar (does not require registration in advance)

#### Third Year

**Fall (17)**
- 4 Engineering 311  Electronic Devices and Circuits (F)
- 4 Engineering 307  Electrical Signals and Systems (F)
- 4 Computer Science 112  Intro to Data Structures with C++ (F,S)
- 3 Core K&U 5
- 2 Interdisciplinary 102  Oral Rhetoric for Engineers (F,S) - Core K&U 6

**Spring (16)**
- 4 Engineering 304  Fundamentals of Digital Systems (S)
- 4 Engineering 332  Analog Circuits and Systems Design (S)
- 4 Elective: Basic Science, Advanced Math, Engineering, or Technical
- 3 Core K&U 7
- 1 Core Comp and Skills  Health and Movement
- 1 Engineering 384  Sustainability Analysis (S) (Required for students seeking Sustainability Designation)

#### Fourth Year

**Fall (15)**
- 4 Engineering 325  Computer Architecture and Digital Systems Design (F)
- 2 Engineering 339  Senior Design Project (F) - Core Contemp. Challenges
- 3 Core K&U 8
- 4 Engineering Elective
- 2 Business 357  Business Aspects for Engineers (F)

**Spring (15)**
- 4 Engineering 302  Engineering Electromagnetics (S)
- 4 Engineering 340  Senior Design Project (S)
- 4 Elective: Basic Science or Advanced Math
- 3 Engineering Elective  Typically ENGR 350
- 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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