# Electrical & Computer Engineering Concentration Model Program

### First Year
- **Fall (16)**
  - 4 Chemistry 103 General Chemistry (F)
  - 2 Engineering 101 Intro to Engineering Design (F)
  - 2 Engineering 181 Graphical Communication Lab (F)
  - 4 Mathematics 171 Calculus I (F,S)
  - 3 English 101 Written Rhetoric
  - 1 Interdisciplinary 149 First Year Seminar
- **Spring (16)**
  - 3 Interdisciplinary 150 Developing the Christian Mind

### Second Year
- **Fall (16)**
  - 4 Engineering 106 Engineering Chemistry and Materials Science (S)
  - 4 Mathematics 172 Calculus II (F,S)
  - 4 Physics 133 Introductory Physics, Mechanics and Gravity (S)
  - 3-4 History Core (See catalog)
  - 1 Health and Fitness (See catalog)
- **Spring (17)**
  - 4 Engineering 202* Statics and Dynamics
  - 4 Engineering 204 Intro to Circuit Analysis and Electronics with Lab
  - 3 Mathematics 231 Differential Equations with Linear Algebra (F,S)
  - 2 Computer Science 104 Applied Computing (F) (CS 106 or 108 may be substituted but both are 4 credit hours)
  - 3 Religion 121 or 131 Biblical Literature/Christian Theology
  - 0 Engineering 295 Internship Workshop
- **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 Economics 151 or 221 Principles of Economics/Principles of Microeconomics
  - 2 Statistics 241 Engineering Statistics (S)
  - 0 Engineering 294 Seminar

### Third Year
- **Fall (16)**
  - 4 Engineering 325 Computer Architecture and Digital Systems Design (F)
  - 4 Elective: Basic Science or Math or Engineering Elective or Tech. Elective
  - 3 Health and Fitness (See catalog) (or during Interim)
  - 3 Philosophy 153 Fundamental Questions in Philosophy
  - 1 Engineering 384 Sustainability Analysis (S) (Required for students seeking Sustainability Designation)
- **Spring (16)**
  - 4 Engineering 304 Fundamentals of Digital Systems (S)
  - 4 Engineering 332 Analog Circuits and Systems Design (S)
  - 3 Health and Fitness (See catalog) (or during Interim)
  - 3 Literature See Core Curriculum section of catalog for options
  - 1 Engineering Special Topics Elective

### Fourth Year
- **Fall (15)**
  - 4 Engineering Elective (Minimum of 3 credits -- see catalog for restrictions)
  - 2 Business 357 Business Aspects for Engineers (F)
  - 3 Engineering Special Topics Elective
- **Spring (16)**
  - 4 Engineering 302 Engineering Electromagnetics (S)
  - 4 Engineering 340 Senior Design Project (S)
  - 4 Elective: Basic Science or Advanced Math
  - 1 Health and Fitness (See catalog) (or during interim)
  - 3 Free Elective
  - 0 Engineering 394 Engineering Seminar

### Other Requirements
- 0-8 Foreign Language (2 years of high school or one year of college)

Revised October 2017

* *ENGR 20x* - All these courses are required but can be taken in any order:
- ENGR 202* - Statics and Dynamics
- ENGR 204 - Intro to Circuit Analysis and Electronics with Lab
- ENGR 209 - Intro to the Laws of Conservation

* Pink listings (core courses) may be swapped as long as all are completed. Note: Engr339 has core courses as prereqs. See Elective Options sheet for elective courses highlighted in green, red, orange, blue and purple. Classes shaded in light brown are optional.

Note to HONORS Students
ENGR 385 or 387 is required of all students seeking to graduate with honors. Talk to your advisor or consult the catalog for details.