

# ELECTRICAL & COMPUTER ENGINEERING CONCENTRATION MODEL PROGRAM



**CALVIN**  
MINDS IN THE MAKING

**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 161 Differential and Integral Calculus (F, S)
  - 3 English 101 Written Rhetoric
  - (1) Interdisciplinary 149 First-Year Prelude
- Interim (3)**
- 3 Interdisciplinary 150 Developing the Christian Mind
- Spring (17)**
- 4 Engineering 106 Engineering Chemistry and Materials Science (S)
  - 4 Mathematics 162 Tech. of Integration, Intro to Infinite Series, & Multivariate Calculus (F, S)
  - 4 Physics 133 Introductory Physics: Mechanics and Gravity (F,S)
  - 4 History 151 or 152 History of the West and the World
  - 1 Health & Fitness (PER 101-129)

**SECOND YEAR**

- Fall (17)**
- 4 Engineering 209 Intro. to the Laws of Conservation & Thermodynamics (F,S)
  - 4 Mathematics 231 Differential Equations with Linear Algebra (F,S)
  - 4 Physics 235 Introductory Physics: Electricity and Magnetism (F)
  - 2 Computer Sci.104 Applied C++ (F)
  - 3-4 Economics 151 or 221 Principles of Economics/Principles of Microeconomics
  - 0 Internship Workshop (must sign up with Prof. Nielsen)
- Interim (4)**
- 3 Free Elective (or consider taking CAS 101 here in place of IDIS102 later)
- Spring (16)**
- 4 Engineering 202 Statics and Dynamics (F,S)
  - 4 Engineering 204 Intro. to Circuit Analysis and Electronics with Lab (S)
  - 4 Mathematics 232 Engineering Mathematics (F,S)
  - 3 Religion 121 or Religion 131
  - 1 Health & Fitness (PER 130-159) (or during interim)

**THIRD YEAR**

- Fall (17)**
- 4 Engineering 311 Electronic Devices and Circuits (F)
  - 4 Engineering 307 Network Analysis (F)
  - 4 Comp. Science 112 Intro. To Data Structures with C++ (F,S)
  - 3 The Arts
  - 2 IDIS 102 Oral Rhetoric for Engineers (F,S)
- Interim\***
- 3 Cross-Cultural Engagement
- Spring (16)**
- 4 Engineering 304 Fundamentals of Digital Systems (S)
  - 4 Engineering 332 Analog Circuits and Systems Design (S)
  - 4 Elective: Basic Science or Advanced Math
  - 3 Philosophy 153 Fundamental Questions in Philosophy
  - 1 Health & Fitness (PER 160-189)

**Note to: HONORS Students  
Engr 294/394 & Engr 385**

These courses are required of all students seeking to graduate with honors. Talk with advisor or consult the catalog about details.

**FOURTH YEAR**

- Fall (15)**
- 4 Engineering 325 Computer Architecture and Digital Systems Design (F)
  - 2 Engineering 339 Senior Design Project (F)
  - 4 Engineering Elective (Minimum of 3 credits - see catalog for restrictions)
  - 2 Business 357 Business Aspects for Engineers
  - 3 Literature
- Interim (3)**
- 3 Engineering Special Topics Course
- Spring (15)**
- 4 Engineering 302 Engineering Electromagnetics (S)
  - 4 Engineering 340 Senior Design Project (S)
  - 4 Elective: Basic Science, Adv. Math, or Engr. Elective
  - 3 Free Elective

**Other Requirements**

- 0-8 Foreign Language (2 years of high school or 1 year of college)

Pink listings (core courses) may be swapped as long all are completed by the end of the senior year.

See Elective Options sheet for elective courses highlighted in green, red and blue.

Revised 13 November 2008