

BSE: Electrical & Computer Engineering Concentration Model Program (Starting Fall 2023 or Later)

First Year

Fall (16)	<input type="checkbox"/> 4 Chemistry 101 + 101L	General Chemistry I (F,S)
	<input type="checkbox"/> 4 Engineering 101 + 101L	Intro to Engineering Design (F)
Spring (17)	<input type="checkbox"/> 4 Mathematics 171	Calculus I (F,S)
	<input type="checkbox"/> 2 <i>Core Foundations</i>	<i>CORE 100: Community and Commitments</i>
	<input type="checkbox"/> 2 <i>Interdisciplinary 102</i>	<i>Oral Rhetoric for Engineers</i> (or CS 104)
	<input type="checkbox"/> 4 Engineering 205	Principles of Materials Science (S)
Spring (17)	<input type="checkbox"/> 4 Mathematics 172	Calculus II (F,S)
	<input type="checkbox"/> 4 Physics 133 + 133L	Introductory Physics: Mechanics and Gravity (S)
	<input type="checkbox"/> 4 <i>Core Comp and Skills</i>	<i>Foundational Writing (ENGL 101)</i>
	<input type="checkbox"/> 1 <i>Core Comp and Skills</i>	<i>Health and Movement (Personal Fitness)</i>
	<input type="checkbox"/> 0 Engineering 294	Engineering Seminar (does not require registration in advance)

★ 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 Laboratory
 ENGR 209 - Intro to Cons. Laws & Fluid Mechanics
 * Course offered as part of the Summer Program in Germany.

* Possibly insert Summer Program in Germany

Second Year

Fall (16)	<input type="checkbox"/> 4 Engineering 20X ★	
	<input type="checkbox"/> 4 Mathematics 271	Multivariable Calculus (F,S)
	<input type="checkbox"/> 4 Physics 235 + 235L	Introductory Physics: Electricity and Magnetism (F)
	<input type="checkbox"/> 2 Comp Sci 104 + 104L	Applied Computing (F) (CS 106 or 108 may be substituted but both are 4 SH)
	<input type="checkbox"/> 2 <i>Core Knowledge and Understanding (see Core Options sheet) - tagged</i>	
	<input type="checkbox"/> 0 Engineering 295	Internship Workshop
Spring (18)	<input type="checkbox"/> 2 <i>Interdisciplinary 184</i>	<i>Intro to Sustainability Challenges (F,S) (ES Tag, required for Sustainability Designation)</i>
	<input type="checkbox"/> 4 Engineering 20X ★	
	<input type="checkbox"/> 4 Engineering 20X ★	
	<input type="checkbox"/> 4 Mathematics 231	Differential Equations with Linear Algebra (F,S)
	<input type="checkbox"/> 2 <i>Statistics 241</i>	<i>Engineering Statistics (S)</i>
	<input type="checkbox"/> 4 <i>Core Foundations</i>	<i>Foundations of Christianity I</i>
<input type="checkbox"/> 0 Engineering 294	Engineering Seminar (does not require registration in advance)	

* Possibly insert Summer Program in Germany

Third Year

Fall (16)	<input type="checkbox"/> 4 Engineering 311 + 311L	Electronic Devices and Circuits (F)
	<input type="checkbox"/> 4 Engineering 307	Electrical Signals and Systems (F)
	<input type="checkbox"/> 4 Comp Sci 112 + 112L	Intro to Data Structures with C++ (F,S)
	<input type="checkbox"/> 2 <i>Core Foundations</i>	<i>Foundations of Christianity II</i>
	<input type="checkbox"/> 2 <i>Economics (2 SH min)</i>	<i>ECON 191 (2) or 233 (4, ES tag) - ECON 221, 222, or 232 can be added or substituted</i>
Spring (17)	<input type="checkbox"/> 4 Engineering 304 + 304L	Fundamentals of Digital Systems (S)
	<input type="checkbox"/> 4 Engineering 332 + 332L	Analog Circuits and Systems Design (S)
	<input type="checkbox"/> 4 Elective: <i>Basic Science</i> , <i>Advanced Math</i> , <i>Engineering</i> , or <i>Technical</i>	
	<input type="checkbox"/> 4 <i>Core Knowledge and Understanding (see Core Options sheet) - tagged</i>	
	<input type="checkbox"/> 1 <i>Core Comp and Skills</i>	<i>Health and Movement (Leisure, Sport, and Skills)</i>

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

Internship Experience (ENGR 385 Optional)

Fourth Year

Fall (16)	<input type="checkbox"/> 4 Engineering 325 + 325L	Computer Architecture and Digital Systems Design (F)
	<input type="checkbox"/> 2 Engineering 339	Senior Design Project (F)
	<input type="checkbox"/> 4 <i>Engineering Elective</i>	
	<input type="checkbox"/> 2 Business 357	Business Aspects for Engineers (F)
	<input type="checkbox"/> 4 <i>Core Knowledge and Understanding (see Core Options sheet) - tagged</i>	
Spring (16)	<input type="checkbox"/> 1 <i>Interdisciplinary 384</i>	<i>Sustainability Experience (F,S) (Required for students seeking Sustainability Designation)</i>
	<input type="checkbox"/> 4 Engineering 302	Engineering Electromagnetics (S)
	<input type="checkbox"/> 4 Engineering 340	Senior Design Project (S)
	<input type="checkbox"/> 4 Elective: <i>Basic Science</i> or <i>Advanced Math</i> (2 SH minimum)	
	<input type="checkbox"/> 2 <i>Engineering Elective</i>	<i>Typically ENGR 350 (2 SH minimum)</i>
<input type="checkbox"/> 2 <i>Core Knowledge and Understanding (see Core Options sheet - 26 SH of total K&U minimum)</i>		
<input type="checkbox"/> 0 Engineering 394	Engineering Seminar (does not require registration in advance)	

See Elective Options sheet for courses allowed for *green*, *red*, *orange*, *blue* and *purple* categories. Classes shaded in light brown are optional.

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

