

Civil & Environmental Engineering Concentration Model Program - 2023-24 Graduates

First Year

Fall (17)	<input type="checkbox"/>	5 Chemistry 101	General Chemistry (F&S)
	<input type="checkbox"/>	3 Engineering 101	Intro to Engineering Design (F)
	<input type="checkbox"/>	1 Engineering 181	Graphical Communication Lab (F)
	<input type="checkbox"/>	4 Mathematics 171	Calculus I (F,S)
	<input type="checkbox"/>	3 <i>English 101</i>	<i>Written Rhetoric</i>
	<input type="checkbox"/>	1 Interdisciplinary 149	First Year Seminar
INT	<input type="checkbox"/>	3 <i>Interdisciplinary 150</i>	<i>Developing the Christian Mind</i>
Spring(15)	<input type="checkbox"/>	3 Engineering 205	Material Science (S)
	<input type="checkbox"/>	4 Mathematics 172	Calculus II (F,S)
	<input type="checkbox"/>	4 Physics 133	Introductory Physics, Mechanics and Gravity (S)
	<input type="checkbox"/>	3 <i>History Core</i>	<i>See Core Curriculum section of catalog for options</i>
	<input type="checkbox"/>	1 <i>Health and Fitness</i>	<i>See Core Curriculum section of catalog for options</i>

★ ENGR 20x - 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 Conservation 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"/>	3 Mathematics 270/271	Multivariable Calculus - Math 270 (F only), Math 271 (F,S)
	<input type="checkbox"/>	4 Physics 235	Introductory Physics: Electricity and Magnetism (F)
	<input type="checkbox"/>	2 Computer Science 104	Applied Computing (F) (CS 106 or 108 may be substituted but both are 4 SH)
	<input type="checkbox"/>	3 <i>Religion 121 or 131</i>	<i>Biblical Literature/Christian Theology</i>
	<input type="checkbox"/>	0 Engineering 295	Internship Workshop
	<input type="checkbox"/>	1 Engineering 184	Sustainability Challenges (F) (Required for students seeking Sustainability Designation)
Spring (17)	<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"/>	3 <i>Economics 221 or 151</i>	<i>Principles of Economics or Microeconomics (ECON 232 or 233 may be substituted)</i>
	<input type="checkbox"/>	2 <i>Statistics 241</i>	<i>Engineering Statistics (S)</i>
	<input type="checkbox"/>	0 Engineering 294	Seminar

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Third Year

Fall (16)	<input type="checkbox"/>	4 Engineering 305	Mechanics of Materials (F)
	<input type="checkbox"/>	4 Engineering 320	Hydraulic Engineering (F)
	<input type="checkbox"/>	4 Engineering 306	Environmental Engineering (F)
	<input type="checkbox"/>	3 <i>The Arts</i>	<i>See Core Curriculum section of catalog for options</i>
	<input type="checkbox"/>	1 <i>Health and Fitness</i>	<i>See Core Curriculum section of catalog for options</i>
Spring (17)	<input type="checkbox"/>	4 Engineering 326	Structural Analysis (S)
	<input type="checkbox"/>	8 Two of	Engineering 321 - Hydraulic Engineering Design (S)** Engineering 308 - Environmental Engineering Design (S)** Engineering Elective
	<input type="checkbox"/>	2 <i>Interdisciplinary 102</i>	<i>Oral Rhetoric for Engineers (F,S)</i>
	<input type="checkbox"/>	3 <i>Philosophy 153</i>	<i>Fundamental Questions in Philosophy</i>

Pink listings (core humanities courses) may be taken in any semester. ECON should be taken prior to BUS 357. PHIL 153 and REL 121/131 should be taken prior to ENGR 340.

Fourth Year

Fall (15)	<input type="checkbox"/>	8 Two of	Engineering Elective Engineering 327 - Structural Design (F)** Elective: Basic Science , Adv. Math , Engr , or Technical
	<input type="checkbox"/>	2 Engineering 339	Senior Design Project (F)
	<input type="checkbox"/>	3 <i>Literature</i>	<i>See Core Curriculum section of catalog for options</i>
	<input type="checkbox"/>	2 Business 357	Business Aspects for Engineers (F)
Spring (16)	<input type="checkbox"/>	4 Elective: Basic Science or Advanced Math	
	<input type="checkbox"/>	4 Engineering 340	Senior Design Project (S) Elective: Basic Science , Adv. Math , Engr , or Technical
	<input type="checkbox"/>	4 One of	Engineering Elective
	<input type="checkbox"/>	3 Engineering Elective	
	<input type="checkbox"/>	1 <i>Health and Fitness</i>	<i>See Core Curriculum section of catalog for options</i>
	<input type="checkbox"/>	0 Engineering 394	Engineering Seminar
	<input type="checkbox"/>	1 Engineering 384	Sustainability Analysis (S) (Required for students seeking Sustainability Designation)

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

****All students must take at least:**
 - two from ENGR 308, 321, or 327
 - three engineering electives
 - one basic sci/advanced math elective
 - one bas sci/adv math/engr/tech elective

Other Requirements

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

