

Chemical Engineering Concentration Model Program - 2022 Graduates

First Year	Fall (17)	<input type="checkbox"/> 5 Chemistry 101	General Chemistry I (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 (17)	<input type="checkbox"/> 5 Chemistry 102	General Chemistry II (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** - Students must take two out of three of the following courses:
 ENGR 202* - Statics and Dynamics
 ENGR 204 - Intro to Circuit Analysis and Electronics with Lab
 ENGR 205 - Material Science

* 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 209	Introduction to Conservation Laws and Fluid Mechanics
		<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
	INT	<input type="checkbox"/> 1 Engineering 184	Sustainability Challenges (F) (Required for students seeking Sustainability Designation)
	INT	<input type="checkbox"/> 3 Free Elective (consider taking <i>IDIS 103</i> here in place of <i>IDIS 102</i> or taking an off-campus interim)	
	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/Principles of Microeconomics</i> (ECON 232 or 233 may be substituted)	
<input type="checkbox"/> 2 <i>Statistics 241</i>		<i>Engineering Statistics (S)</i>	
INT	<input type="checkbox"/> 0 Engineering 294	Seminar	

* Possibly insert Summer Program in Germany

Third Year	Fall (17)	<input type="checkbox"/> 3 Engineering 303	Chem. Engr. Principles & Thermodynamics (F)
		<input type="checkbox"/> 5 Chemistry 241 OR 240	Organic Chemistry I or Fund. of Organic Chemistry (F)
		<input type="checkbox"/> 4 Chemistry 351	Physical Chemistry I (F)
		<input type="checkbox"/> 3 <i>The Arts</i>	<i>See Core Curriculum section of catalog for options</i>
		<input type="checkbox"/> 2 <i>Interdisciplinary 102</i>	<i>Oral Rhetoric for Engineers (F,S)</i>
	Spring (17)	<input type="checkbox"/> 4 Engineering 312	Chemical Engineering Thermodynamics (S)
		<input type="checkbox"/> 4 Engineering 330	Fluid Flow & Heat Transfer (S)
		<input type="checkbox"/> 5 Chemistry 242	Organic Chemistry II (S)
		OR Chemistry 324L plus (Chemistry 320 OR 321) Biochemistry & Lab	
		<input type="checkbox"/> 1 <i>Health and Fitness</i>	<i>See Core Curriculum section of catalog for options</i>
INT	<input type="checkbox"/> 3 <i>Philosophy 153</i>	<i>Fundamental Questions in Philosophy</i>	

Fourth Year	Fall (16)	<input type="checkbox"/> 4 Engineering 331	Kinetics/Reactor Design
		<input type="checkbox"/> 4 Engineering 335	Mass Transfer & Staging Operations (F)
		<input type="checkbox"/> 2 Engineering 339	Senior Design Project (F)
		<input type="checkbox"/> 4 <i>Elective: Advanced Science</i>	
		<input type="checkbox"/> 2 Business 357	Business Aspects for Engineers (F)
	Spring (14)	<input type="checkbox"/> 2 Engineering 337	Chemical Engineering Laboratory (S)
		<input type="checkbox"/> 4 Engineering 340	Senior Design Project (S)
		<input type="checkbox"/> 4 Engineering 342	Process Control (S)
		<input type="checkbox"/> 3 <i>Literature</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>
<input type="checkbox"/> 0 Engineering 394		Engineering Seminar	
INT	<input type="checkbox"/> 3 Free Elective		
INT	<input type="checkbox"/> 1 Engineering 384	Sustainability Analysis (S) (Required for students seeking Sustainability Designation)	

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.

See Elective Options sheet for courses allowed for the orange and green categories.

Classes shaded in light brown are optional.

Other Requirements

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

