

Minimum Hours: 133

# Engineering (B.S.E.)

## Chemistry option

2021-2022 Catalog

FRESHMAN – Fall Semester		Hours	FRESHMAN – Spring Semester		Hours
COL 100 Bryan Gateway Seminar		1	CSCI 116 Programming I		3
ENG 109 College Writing I <u>OR</u> ENG 111 Freshman English*		3	CT 113 Critical Survey of Worldviews		3
HIS general survey course (100/200 level)		3	PHYS 245 College Physics I w/Lab		3/1
MATH elective**		3	<b>EGR 124 Intro to Engineering Design-Art of Engineering</b>		3
<b>CHEM 131 General Chemistry I</b>		4	<b>MATH 221 Calculus II</b>		4
<b>EGR 121 Introduction to Engineering</b>		2			
			(ENG 110 College Writing II)*		
<b>TOTAL HOURS</b>		<b>16</b>	<b>TOTAL HOURS</b>		<b>17</b>

SOPHOMORE – Fall Semester			SOPHOMORE – Spring Semester		
CT 209 CLF: Missional Engineering		1	<b>CHEM 132 General Chemistry II</b>		4
<b>EGR 223 Engineering Mechanics – Statics w/Lab</b>		3/1	<b>EGR 222 Circuits and Instrumentation</b>		3
<b>EGR 331 Data Visualization</b>		3	<b>EGR 224 Engineering Mechanics - Dynamics</b>		3
<b>EGR 347 Engineering Professional Development</b>		1	<b>EGR 226 Mechanics of Materials w/Lab</b>		3/1
<b>MATH 222 Calculus III</b>		4	<b>MATH 242 Statistics for Scientists &amp; Engineers</b>		3
<b>PHYS 246 College Physics II w/Lab</b>		3/1			
<b>TOTAL HOURS</b>		<b>17</b>	<b>TOTAL HOURS</b>		<b>17</b>

JUNIOR – Fall Semester			JUNIOR – Spring Semester		
<b>CHEM 241 Organic Chemistry I</b>		4	Choose <b>ONE</b> of the following: ENG 100/200, FA 211, FLM 210, MUS 100/200, or THT 100/200 (excludes ENG 245, lessons, ensembles, practicums)		3
<b>EGR 321 Design of Experiments</b>		3	Choose <b>ONE</b> of the following: PSY 111, 228, 330, or 334		3
<b>EGR 323 Engineering Thermodynamics w/Lab</b>		3/1	<b>CHEM 242 Organic Chemistry II</b>		4
<b>MATH 326 Differential Equations</b>		4	<b>EGR 322 Fluid Mechanics</b>		4
			<b>EGR 422 Heat Transfer</b>		3
<b>TOTAL HOURS</b>		<b>15</b>	<b>TOTAL HOURS</b>		<b>17</b>

SENIOR – Fall Semester			SENIOR – Spring Semester		
BIB 222 Old Testament Literature & Interpretation		3	BIB 224 New Testament Literature & Interpretation		3
COMM 111 Intro to Communication		3	CT 105 CLF: Engineering Service		1
<b>CHEM Elective (300/400 level)</b>		4	CT 210 CLF: Biblical Environmentalism		1
<b>EGR 225 Engineering Economics</b>		2	PHIL 424 Engineering Ethics		3
<b>EGR 491 Capstone Senior Design I</b>		2	<b>CHEM Electives (300/400 level)</b>		5
<b>EGR Elective (300/400 level)</b>		3	<b>EGR 492 Capstone Senior Design II</b>		4
<b>TOTAL HOURS</b>		<b>17</b>	<b>TOTAL HOURS</b>		<b>17</b>

\*Students are required to take either ENG 109/110 College Writing I *and* II (6 credits) *OR* ENG 111 Freshman English (3 credits). Placement in ENG 111 requires an ACT English score of at least 21 *OR* an SAT Evidence-Based Reading & Writing score of at least 530 *OR* CLT score of at least 68. Students who are placed in the ENG 109-110 sequence will need to take ENG 110 in the spring semester of the freshman year.

\*\* Choice of MATH elective should prepare student to enroll in MATH 221 Calculus II which is required in the major. Students taking Math 117 Precalculus will start the calculus sequence with Math 122 Calculus I in the second semester.

This document is to be used for planning purposes only. Please refer to the academic catalog for complete information. Course planning should be completed in consultation with your academic adviser. Not all courses are offered every semester or every year.