

Minimum Hours: 133

# Engineering (B.S.E.)

## Chemistry option

2020-2021 Catalog

FRESHMAN – Fall Semester		Hours	FRESHMAN – Spring Semester		Hours
COL 100 Bryan Gateway Seminar		1	PHYS 245 College Physics I		4
ENG 109 College Writing I <u>OR</u> ENG 111 Freshman English*		3	CSCI 116 Programming I		3
CT 209 CLF: Missional Engineering		1	CT 210 CLF: Biblical Environmentalism		1
MATH elective**		3	<b>MATH 221 Calculus II</b>		4
CT CLF elective		1	<b>EGR 124 Intro to Engineering Design-Art of Engineering</b>		3
<b>CHEM 131 General Chemistry I</b>		4	<b>EGR 122 Engineering Service</b>		1
<b>EGR 121 Introduction to Engineering</b>		3	(ENG 110 College Writing II)*		
<b>TOTAL HOURS</b>		<b>16</b>	<b>TOTAL HOURS</b>		<b>16</b>

SOPHOMORE – Fall Semester		Hours	SOPHOMORE – Spring Semester		Hours
PHYS 246 College Physics II		4	<b>MATH 326 Differential Equations</b>		4
CT 113 Critical Survey of Worldviews		3	<b>EGR 222 Circuits and Instrumentation</b>		3
<b>MATH 222 Calculus III</b>		4	<b>EGR 224 Engineering Mechanics - Dynamics</b>		3
<b>EGR 223 Engineering Mechanics - Statics</b>		3	<b>EGR 226 Mechanics of Materials</b>		3
<b>EGR 331 Data Visualization</b>		3	<b>CHEM 132 General Chemistry II</b>		4
<b>TOTAL HOURS</b>		<b>17</b>	<b>TOTAL HOURS</b>		<b>17</b>

JUNIOR – Fall Semester		Hours	JUNIOR – Spring Semester		Hours
BIB 222 Old Testament Literature & Interpretation		3	BIB 224 New Testament Literature & Interpretation		3
HIS general survey course (100/200 level)		3	<b>EGR 322 Fluid Mechanics</b>		4
<b>EGR 321 Design of Experiments</b>		3	<b>EGR 422 Heat Transfer</b>		3
<b>EGR 323 Engineering Thermodynamics</b>		3	<b>MATH 242 Statistics for Scientists &amp; Engineers</b>		3
<b>EGR 347 Engineering Professional Development I</b>		1	<b>CHEM 242 Organic Chemistry II</b>		4
<b>CHEM 241 Organic Chemistry I</b>		4			
<b>TOTAL HOURS</b>		<b>17</b>	<b>TOTAL HOURS</b>		<b>17</b>

SENIOR – Fall Semester		Hours	SENIOR – Spring Semester		Hours
COMM 111 Intro to Communication		3	Choose <b>ONE</b> of the following: SS 211, PSGS 315, PSY 111, 228, 334		3
Choose <b>ONE</b> of the following: ENG 211, FA 211, MUS 210, THT 111, or FLM 210		3	<b>EGR 424 Engineering Ethics</b>		3
<b>EGR 349 Engineering Professional Development II</b>		1	<b>EGR 492 Capstone Senior Design II</b>		3
<b>EGR 225 Engineering Economics</b>		3	<b>CHEM elective (300/400 level)</b>		4
<b>EGR 491 Capstone Senior Design I</b>		3	<b>EGR elective</b>		3
<b>CHEM elective (300/400 level)</b>		4			
<b>TOTAL HOURS</b>		<b>17</b>	<b>TOTAL HOURS</b>		<b>16</b>

\*Depending on standardized test scores, students are required to take either ENG 109-110 College Writing I and II (6 credits) OR ENG 111 Freshman English (3 credits). 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.

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.