

Minimum Hours: 133

# Engineering (B.S.E.)

## Mechanical option

2023-2024 Catalog

FRESHMAN – Fall Semester		Hours	FRESHMAN – Spring Semester		Hours
COL 101 Foundations for Student Success+	1		CSCI 116 Programming I	3	
ENG 109 College Writing I <u>OR</u> ENG 111 Freshman English*	3		HIS general survey course (100/200 level)	3	
CT 113 Critical Survey of Worldviews	3		<b>PHYS 245/245L College Physics I w/Lab</b>	3/1	
MATH elective**	3		<b>MATH 221 Calculus II</b>	4	
CHEM 131 General Chemistry I	4		<b>EGR 124 Introduction to Design</b>	3	
<b>EGR 121 Introduction to Engineering</b>	<b>2</b>		(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		Choose <b>ONE</b> of the following: PSY 111, 228, 330, or 334	3	
<b>EGR 223 Statics</b>	<b>4</b>		CT 210 CLF: Biblical Environmentalism	1	
<b>EGR 331 Data Visualization</b>	<b>3</b>		<b>EGR 222 Circuits and Instrumentation</b>	<b>3</b>	
<b>EGR 347 Engineering Professional Development</b>	<b>1</b>		<b>EGR 224 Dynamics</b>	<b>3</b>	
<b>MATH 222 Calculus III</b>	<b>4</b>		<b>EGR 226 Mechanics of Materials</b>	<b>4</b>	
<b>PHYS 246/246L College Physics II w/Lab</b>	<b>3/1</b>		<b>MATH 211 Elementary Statistics</b>	<b>3</b>	
<b>TOTAL HOURS</b>	<b>17</b>		<b>TOTAL HOURS</b>	<b>17</b>	
JUNIOR – Fall Semester			JUNIOR – Spring Semester		
<b>EGR 321 Design of Experiments</b>	<b>3</b>		BIB 224 New Testament Literature & Interpretation	3	
<b>EGR 323 Thermodynamics</b>	<b>4</b>		CT 105 CLF: Engineering Service	1	
<b>MATH 326 Differential Equations</b>	<b>4</b>		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>EGME 423 Quality Engineering</b>	<b>3</b>		<b>EGR 322 Fluid Mechanics</b>	<b>4</b>	
<b>EGME 425 Fracture of Materials</b>	<b>3</b>		<b>EGR 422 Heat Transfer</b>	<b>3</b>	
			<b>EGME 422 Kinematics &amp; Robotics</b>	<b>3</b>	
<b>TOTAL HOURS</b>	<b>17</b>		<b>TOTAL HOURS</b>	<b>17</b>	
SENIOR – Fall Semester			SENIOR – Spring Semester		
BIB 222 Old Testament Literature & Interpretation	3		PHIL 424 Engineering Ethics	3	
COMM 111 Intro to Communication	3		<b>EGR 492 Capstone Senior Design II</b>	<b>4</b>	
<b>EGR 225 Engineering Economics</b>	<b>2</b>		<b>Engineering Electives (300/400 level)-EGR, EGCI, EGME</b>	<b>3</b>	
<b>EGR 491 Capstone Senior Design I</b>	<b>2</b>		<b>EGME 424 Machine Component Design</b>	<b>3</b>	
<b>EGME 321 Engineering Materials</b>	<b>3</b>		<b>EGME Elective</b>	<b>3</b>	
<b>EGME 323 Manufacturing Engineering</b>	<b>3</b>				
<b>TOTAL HOURS</b>	<b>16</b>		<b>TOTAL HOURS</b>	<b>16</b>	

+ COL 101 is required of first time freshmen who have no standardized test scores or those who score less than 18 on the ACT Composite, less than 960 on the SAT or less than 61 on the CLT.

\*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. Minimum total hours for a bachelors degree is 120.