

Minimum Hours: 133

Engineering (B.S.E.)

Biology option

2022-2023 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		MATH 221 Calculus II	4	
CHEM 131 General Chemistry I w/Lab	4		EGR 124 Intro to Engineering Design-Art of Engineering	3	
EGR 121 Introduction to Engineering	2		(ENG 110 College Writing II)*		
TOTAL HOURS	16		TOTAL HOURS	17	
SOPHOMORE – Fall Semester			SOPHOMORE – Spring Semester		
CT 209 CLF: Missional Engineering	1		CT 210 CLF: Biblical Environmentalism	1	
EGR 223 Engineering Mechanics – Statics w/Lab	3/1		Choose ONE of the following: PSY 111, 228, 330, or 334	3	
EGR 331 Data Visualization	3		EGR 222 Circuits and Instrumentation	3	
EGR 347 Engineering Professional Development	1		EGR 224 Engineering Mechanics - Dynamics	3	
MATH 222 Calculus III	4		EGR 226 Mechanics of Materials w/Lab	3/1	
PHYS 246 College Physics II w/Lab	3/1		MATH 242 Statistics for Scientists & Engineers	3	
TOTAL HOURS	17		TOTAL HOURS	17	
JUNIOR – Fall Semester			JUNIOR – Spring Semester		
BIO 111 Introduction to Biology w/Lab	3/1		BIB 224 New Testament Literature & Interpretation	3	
EGR 321 Design of Experiments	3		Choose ONE of the following: ENG 100/200, FA 211, FLM 210, MUS 100/200, or THT 100/200 (excludes ENG 245, lessons, ensembles, practicums)	3	
EGR 323 Engineering Thermodynamics w/Lab	3/1		BIO 211 Principles of Biology	4	
MATH 326 Differential Equations	4		EGR 322 Fluid Mechanics	4	
			EGR 422 Heat Transfer	3	
TOTAL HOURS	15		TOTAL HOURS	17	
SENIOR – Fall Semester			SENIOR – Spring Semester		
BIB 222 Old Testament Literature & Interpretation	3		CT 105 CLF: Engineering Service	1	
COMM 111 Intro to Communication	3		PHIL 424 Engineering Ethics	3	
BIO 323 Advanced Anatomy & Physiology I	4		EGR 492 Capstone Senior Design II	4	
EGR 225 Engineering Economics	2		Option Elective***	3	
EGR 491 Capstone Senior Design I	2		Option Elective***	3	
Option Elective***	3		EGR Elective (300/400 level)	3	
TOTAL HOURS	17		TOTAL HOURS	17	

*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.

***Three option electives chosen from BIO 224, 324; EGME 300/400 level elective; EHS 342

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.