BACHELOR OF SCIENCE: ENGINEERING

MAJOR: BSE WITH CONCENTRATION IN ENVIRONMENTAL ENGINEERING

Four-Year Planning Guide ■ Catalog Year 2023-2024

Cornerstone UNIVERSITY

FALL		SPRING		SUMMER	
FRESHMAN (2023)		**FRESHMAN (2024)**		**(2024)**	
MAT 131 Calculus I*	5	MAT 132 Calculus II*	5	COM 112 Communication in Culture**	3
PHY 221 Physics I*	5	PHY 222 Physics II*	5	ENG 212 Writing in Culture*, **	3
CHM 111 Principles of General Chemistry*	4	EGR 100 Intro to Eng *	1		
CSU 107 Academic Foundations	3	EGR 111 Intro to Eng Graphics *	1		
		EGR 112 Intro to Programming *	2		
		REL 104 Old Testament - J	3		
	17		17		6
SOPHOMORE (2024)		**SOPHOMORE (2025)**		**(2025)**	
MAT 234 Multivariate Calculus*	3	REL 204 New Testament - J	3	EGR 380 Internship I	3
EGR 113 Intro to CAD/CAM *	1	MAT 235 Diff Eq & Linear Algebra*	3		
EGR 209 Mechanics and Machines*	4	EGR 250 Materials * +Lab	4		
EGR 220 Data Analysis*	1	EGR 214 Circuit Analysis* +Lab	4		
EGR 185 First Year Engineering Design *	2	EGR 309 Machine Design I * +Lab	4		
MAT 251 Probability & Stats*	3				
REL 102 Christian Worldview	3				
	17		18		3
JUNIOR (2025)		**JUNIOR (2026)**		**(2026)**	
EGR 226 Digital Systems* +Lab	4	EGR 365 Fluids or GEGR 463 (GV)	4	EGR 380 Internship II	3
EGR 362 Thermal Fluids or EGR 360	4	ECO 342 Field Biology (spring even yrs.	4		
BIO 151 General Biology	4	EGR 437 Environmental Engineering	4		
ECO 341 Ecology (fall of odd years)	4	EGR 345 Dyn. Sys. Modeling or EGR 31	4		
	16		16		3
SENIOR (2026)		**SENIOR (2027)**			
EGR 485 Capstone Project & Ethics	1	EGR 486 Capstone Project II	2		
ECO 241 Environmental Science	4	EGR 336 Project Management	3		
PHI 211 Philosophy in Culture	3	REL 352 Christian Beliefs & History - J	3		
HIS 114 Making Modern World 1500-Present	3	HUM 311 Imagination in Culture	3		
Social Science Course ***	3	Global Studies Requirement	3		
	14		14		

TOTAL CREDITS 141

****See General Education Core handout for required courses *Engineering Foundations Track (course required prior to secondary admission into Engineering Degree Program)	**Course offered online at CU over summer
***Choose One: PSY 111, SOC 111, ECN 231, ECN 232, CMI 223, SSC 161, SSC 211, SSC 262	
	J- Course offered during J-term

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REQUIRED ENGINEERING CORE CLASSES			CREDITS
CHM	111	Principles of General Chemistry	4
EGR	100	Introduction to Engineering	1
EGR	111	Introduction to Engineering Graphics	1
EGR	112	Introduction to Programming	2
EGR	113	Introduction to CAD/CAM	1
EGR	185	First Year Engineering Design	2
EGR	209	Mechanics and Machines	4
EGR	214	Circuit Analysis I +Lab	4
EGR	220	Measurement & Data Analysis	1
EGR	226	Introduction to Digital Systems	4
EGR	250	Material Science and Engineering + Lab	4
EGR	309	Machine Design I + Lab	4
EGR	345	Dynamics Systems & Modeling or EGR 312 Dynamics at 3 credits	4
EGR	362	Thermal & Fluid Systems or EGR 360 Thermodynamics at 4 credits	4
EGR	380	Internship I	3
EGR	380	Internship II	3
EGR	485	Capstone Project & Ethics	1
EGR	486	Capstone Project II	2
MAT	131	Calculus I	5
MAT	132	Calculus II	5
MAT	234	Multivariate Calculus	3
MAT	235	Diff Eq. and Linear Algebra	3
MAT	251	Probability and Statistics	3
PHY	221	Physics for Scientists & Engineers I	5
PHY	222	Physics for Scientists & Engineers II	5
		Total	78

REQUIRED ENGINEERING MAJOR COURSES				CREDITS
BIO	151	General Biology		4
ECO	241	Environmental Science		4
ECO	341	Ecology		4
ECO	342	Field Biology		4
EGR	336	Project Management		3
EGR	437	Environmental Engineering		4
Choose 1 of the following electives				4
EGR	365	Fluid Mechanics	4	
GEGR	463	Alternative Energy Systems (GV)	4	
		Total		27
		CUMULATIVE TOTAL		***105***