BACHELOR OF SCIENCE: ENGINEERING

MAJOR: BSE WITH CONCENTRATION IN MECHANICAL 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	MAT	235	Diff Eq & Linear Algebra*	3	EGR 380	Internship I	3	
EGR	113	Intro to CAD/CAM *	1	EGR	250	Materials * + Lab	4				
EGR	209	Mechanics and Machines *	4	EGR	214	Circuit Analysis* + Lab	4				
EGR	220	Data Analysis*	1	EGR	309	Machine Design I * + Lab	4				
EGR	185	First Year Engineering Design *	2	REL	204	New Testament - J	3				
MAT	251	Probability & Stats*	3								
			14				18				3
JUNIOR (2025)				**JUNIOR (2026)**				**(2026)**			
EGR	360	Thermodynamics	4	REL	102	Christian Worldview	3	EGR 380	Internship II	3	
EGR	367	Manufacturing Process + Lab	4	EGR	440	Production Models	3				
EGR	226	Digital Systems + Lab	4	EGR	336	Project Management	3				
EGR	350	Vibrations	3	EGR	365	Fluids	3				
				EGR	345	Dyn. Sys. Model. or EGR312	4				
			15				16				3
SENIOR (2026)				**SENIOR (2027)**							
EGR	485	Capstone Project & Ethics	1	EGR	486	Capstone Project II	2				
HIS	114	Making Modern World 1500-Present	3	REL	352	Christian Beliefs & History-J	3				
EGR	468	Heat Transfer	3	HUM	311	Imagination in Culture	3				
EGR	301	Product Design	4	EGR	409	Machine Design 2	3				
Global Studies Requirement****			3	ECN	232	Prin. Of Microeconomics**	3				
PHI	211	Philosophy in Culture	3								
			17				14				

TOTAL CREDITS **140**

****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

**ECN 232 counts as the Social Science requirment

J- Course offered during J-term

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Cornerstone UNIVERSITY®

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 + Lab	4
EGR	250	Material Science and Engineering + Lab	4
EGR	309	Machine Design I	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
EGR	301	Analytical Tools for Product Design	4
EGR	336	Project Management	3
EGR	350	Vibrations	3
EGR	365	Fluids	3
EGR	336	Manufacturing Processes + Lab	4
EGR	409	Machine Design 2	3
EGR	440	Production Models	3
EGR	468	Heat Transfer	3
ECN	232	Principles of Microeconomics	3
		Total	**29**
		CUMULATIVE TOTAL	***107***