



BACHELOR OF SCIENCE: ENGINEERING

MAJOR: BSE WITH CONCENTRATION IN ENGINEERING MANAGEMENT

Four-Year Planning Guide ■ Catalog Year 2023-2024

FALL

FRESHMAN (2023)

MAT	131	Calculus I*	5
PHY	221	Physics I*	5
CHM	111	Principles of General Chemistry*	4
CSU	107	Academic Foundations	3

17

SOPHOMORE (2024)

MAT	234	Multivariate Calculus*	3
EGR	113	Intro to CAD/CAM *	1
EGR	209	Mechanics and Machines *	4
EGR	220	Data Analysis*	1
EGR	185	First Year Engineering Design *	2
MAT	251	Probability & Stats*	3

14

JUNIOR (2025)

EGR	226	Digital Systems* + Lab	4
EGR	362	Thermal Fluids or EGR 360	4
EGR	367	Manufacturing Process + Lab	4
MGT	231	Principles of Management	3

15

SENIOR (2026)

EGR	485	Capstone Project & Ethics	1
HIS	114	Making Modern World 1500-Present	3
		Eng Management Elective	3
HUM	311	Imagination in Culture	3
		Global Studies Requirement	3
ACC	221	Accounting I	3

16

SPRING

FRESHMAN (2024)

MAT	132	Calculus II*	5
PHY	222	Physics II*	5
EGR	100	Intro to Eng *	1
EGR	111	Intro to Eng Graphics *	1
EGR	112	Intro to Programming *	2
REL	104	Old Testament - J	3

17

SOPHOMORE (2025)

MAT	235	Diff Eq & Linear Algebra*	3
EGR	250	Materials * + Lab	4
EGR	214	Circuit Analysis* + Lab	4
EGR	309	Machine Design I * + Lab	4
REL	204	New Testament - J	3

18

JUNIOR (2026)

REL	102	Christian Worldview	3
PHI	211	Philosophy in Culture	3
EGR	440	Production Models	3
EGR	336	Project Management	3
EGR	345	Dyn. Sys. Modeling or EGR 311	4

16

SENIOR (2027)

EGR	486	Capstone Project II	2
REL	352	Christian Beliefs & History - J	3
ACC	222	Accounting II	3
		Eng Management Elective	3
ECN	232	Microeconomics	3

14

SUMMER

(2024)

COM	112	Communication in Culture**	3
ENG	212	Writing in Culture*, **	3

6

(2025)

EGR	380	Internship I	3
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3

(2026)

EGR	380	Internship II	3
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3

TOTAL CREDITS

139

****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 requirement.

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	4
EGR 220 Measurement & Data Analysis	1
EGR 226 Introduction to Digital Systems	4
EGR 250 Material Science and Engineering	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 336 Project Management	3
EGR 367 Manufacturing Processes	4
EGR 440 Production Models	3
ACC 221 Accounting I	3
ACC 222 Accounting II	3
ECN 232 Microeconomics	3
MGT 231 Principles of Management	3
<u>Choose 2 of the following electives</u>	6
FIN 341 Principles of Finance	3
MGT 333 Operations Management	3
MGT 335 Organizational Behavior	3
MGT 337 Entrepreneurship	3
MGT 339 International Management	3
MKT 251 Principles of Marketing	3
Total	28

CUMULATIVE TOTAL 106

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