



BACHELOR OF SCIENCE: ENGINEERING

MAJOR: BSE WITH CONCENTRATION IN ENGINEERING MANAGEMENT

Cornerstone
UNIVERSITY®

Four-Year Planning Guide ■ Catalog Year 2021-2022

FALL

FRESHMAN (2021)

| | | |
|---------|----------------------------------|-----------|
| MAT 131 | Calculus I* | 5 |
| PHY 221 | Physics I* | 5 |
| CHM 111 | Principles of General Chemistry* | 4 |
| IDS 107 | Academic Foundations | 2 |
| IDS 108 | Service Foundations | 0 |
| KIN 100 | Total Fitness and Wellness | 2 |
| | | 18 |

SOPHOMORE (2022)

| | | |
|----------|-------------------------------------|-----------|
| MAT 234 | Multivariate Calculus* | 3 |
| GEGR 113 | Intro to CAD/CAM (GV)* | 1 |
| EGR 209 | Mechanics* | 4 |
| EGR 220 | Data Analysis* | 1 |
| GEGR 185 | First Year Engineering Design (GV)* | 2 |
| MAT 251 | Probability & Stats* | 3 |
| IDS 101 | Creativity & Innovation | 2 |
| | | 16 |

JUNIOR (2023)

| | | |
|----------|----------------------------|-----------|
| GEGR 345 | System Modeling (GV) | 4 |
| EGR 362 | Thermo Fluids | 4 |
| GEGR 367 | Manufacturing Process (GV) | 4 |
| MGT 231 | Principles of Management | 3 |
| ACC 221 | Accounting I | 3 |
| | | 18 |

SENIOR (2024)

| | | |
|---------|----------------------------------|-----------|
| 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 |
| | | 13 |

SPRING

FRESHMAN (2022)

| | | |
|----------|-----------------------------|-----------|
| MAT 132 | Calculus II* | 5 |
| PHY 222 | Physics II* | 5 |
| GEGR 100 | Intro to Eng (GV)* | 1 |
| GEGR 111 | Intro to Eng Graphics (GV)* | 1 |
| GEGR 112 | Intro to Programming (GV)* | 2 |
| REL 104 | Old Testament - J | 3 |
| | | 17 |

SOPHOMORE (2023)

| | | |
|----------|---------------------------|-----------|
| MAT 235 | Diff Eq & Linear Algebra* | 3 |
| EGR 250 | Materials * | 4 |
| EGR 214 | Circuit Analysis* | 4 |
| GEGR 309 | Machine Design I (GV)* | 4 |
| IDS 207 | Core Sophomore | 2 |
| | | 17 |

JUNIOR (2024)

| | | |
|----------|------------------------|-----------|
| REL 204 | New Testament - J | 3 |
| PHI 211 | Philosophy in Culture | 3 |
| GEGR 440 | Production Models (GV) | 3 |
| EGR 336 | Project Management | 3 |
| IDS 307 | Core Junior | 2 |
| | | 14 |

SENIOR (2025)

| | | |
|---------|---------------------------------|-----------|
| 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

(2022)

| | | |
|---------|----------------------------|----------|
| COM 112 | Communication in Culture** | 3 |
| ENG 212 | Writing in Culture*, ** | 3 |
| | | 6 |

(2023)

| | | |
|---------|------------------|----------|
| EGR 380 | Internship I | 3 |
| EGR 226 | Digital Systems* | 4 |
| | | 7 |

(2024)

| | | |
|---------|---------------|----------|
| EGR 380 | Internship II | 3 |
| | | 3 |

TOTAL CREDITS

143

| | |
|---|---|
| ****See General Education Core handout for required courses | **Course offered online at CU over summer |
| *Engineering Foundations Track (course required prior to secondary admission into Engineering Degree Program) | |
| ECN 232 counts as the Social Science requirement. | |
| GV- Courses taken at Grand Valley State University | J- Course offered during J-term |

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REQUIRED ENGINEERING CORE CLASSES

| | CREDITS |
|--|----------------|
| CHM 111 Principles of General Chemistry | 4 |
| GEGR 100 Introduction to Engineering (GV) | 1 |
| GEGR 111 Introduction to Engineering Graphics (GV) | 1 |
| GEGR 112 Introduction to Programming (GV) | 2 |
| GEGR 113 Introduction to CAD/CAM (GV) | 1 |
| GEGR 185 First Year Engineering Design (GV) | 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 |
| GEGR 309 Machine Design I (GV) | 4 |
| GEGR 345 Dynamics Systems & Modeling (GV) or GEGR 312 (GV) Dynamics at 3 credits | 4 |
| EGR 362 Thermal & Fluid Systems or GEGR 360 (GV) 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 |
| GEGR 367 Manufacturing Processes (GV) | 4 |
| GEGR 440 Production Models (GV) | 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**