Construction Engineering and Management

Bachelor of Science (B.S.) – Catalog Year 2026-2027

Program Overview

Earning a Bachelor of Science in construction engineering and management provides the foundation for a financially rewarding, dynamic and exciting career. Construction engineers are in high demand in the USA and worldwide due to increasing need for infrastructure improvement projects and new construction. Most students earning the B.S. in CEM will be eligible to take the Fundamentals of Engineering (FE) exam and eventually may become a licensed professional engineer (PE). This unique degree program integrates courses from four interdisciplinary fields: engineering, construction, business, and architecture. Graduates are sought by a range of general and specialty contractors, engineering, management and consulting firms, developers, builders, and construction manufacturing/supply companies as well as public organizations.

Academic Advising

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Graduation Requirements & Policies

All CU Denver Engineering students are required to complete the following minimum general graduation requirements:

1. Complete a minimum of 127 semester hours.
2. Achieve a minimum 2.0 CU cumulative grade point average (GPA).
3. Complete all college and major requirements.
4. Residency: complete a minimum of 30 CU Denver hours in good standing at CU Denver.
5. Terminal Residency: complete at least the final two semesters as an enrolled CEDC student

Program Requirements & Policies

Students completing the Construction Engineering and Management B.S. degree are required to complete the following minimum program requirements:

1. Complete 24 semester hours of CU Denver Core Curriculum coursework.
2. Complete 30 semester hours of Math and Science.
3. Complete a specialty in one Engineering Science and Design topic with at least 15 credits.
4. Achieve a minimum 2.0 CU cumulative grade point average (GPA) in all major courses.

Courses	Credits	Notes
* Course prerequisites change regularly. Students are responsible for consulting advisors and the class schedule in the student portal for prerequisite information. *		
Required CU Denver Core Curriculum Coursework	**24**	
Intellectual Competencies: ENGL 1020+ENGL 2030	6	
Humanities and the Arts	6	
Behavioral Sciences	3	
Social Sciences	3	
Cultural Diversity	3	
International Perspectives	3	
Required Math and Science Coursework	**30**	
MATH 1401 Calculus I	4	
MATH 2411 Calculus II	4	
Statistics course	3	MATH 2830, MATH 3800, CVEN 3611, ELEC 3817
PHYS 2311 Calculus-based Physics I	4	
PHYS 2321 Calculus-based Physics Lab I	1	
ENGR 1130 Engineering Chemistry	5	
Additional math and science	9	
Required Architecture & Business Coursework	**9**	
ARCH 3330 Building Systems I	3	
ARCH 4440 Building Systems II	3	
BMIN 1000 Introduction to Business	3	Or BLAW 3300 Construction Law & Contracts
Required Engineering Coursework	**46**	
CEMT 1000 Introduction to Construction Management	1	Or CVEN 1067 Intro to Civil Engineering
CEMT 2100 Construction Mgmt Fundamentals	3	
CEMT 2300 Heavy Civil Construction & Equipment	3	
CEMT 3100 Field Engineering & Management	3	
CEMT 3231 Construction Materials and Methods	3	

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CEMT 4067 Senior Capstone	3	
CEMT 4232 Construction Planning and Controls	3	
CEMT 4233 Construction Cost Estimating	3	
CEMT 4234 Sustainable Construction	3	
CEMT 4236 Project Management	3	
CEMT 4240 Building Information Modeling	3	
CEMT 4242 Construction Safety	3	
CEMT 4939 Internship	1	Supervised internship course; 3-month minimum.
CVEN 1025 Civil Engineering Graphics	3	
CVEN 2214 Surveying	1	
CVEN 2215 Surveying Lab	1	
ENGR 1200 Engineering Design	3	Or ARCH 1110 Intro to Architecture
ENGR 1100 Computational Foundations	3	
Engineering Science and Design coursework	15	Complete 15 credits in an approved Civil, Computer Science, Electrical, or Mechanical Engineering specialty. Students should select a specialty and begin coursework by the sophomore year.
Technical Elective	3	

SAMPLE ACADEMIC PLAN OF STUDY

The following academic plan is a *sample* pathway to completing degree requirements for this major. Students should tailor this plan based on previously completed college coursework (e.g., AP, IB, CLEP, dual/concurrent enrollment, and transfer credit), course availability, and individual preferences related to course load, schedules, or add-on programs such as minors or double majors. Students must meet with an advisor in their department to determine the correct course sequence for their selected Engineering Science specialty.

Semester 1	CRS
BMIN 1000 Introduction to Business	3
CEMT 1000 Intro to Construction Management	1
Core Curriculum Course	3
ENGL 1020 Core Composition I	3
ENGR 1200 Engineering Design	3
MATH 1401 Calculus I	4

Semester 2	CRS
CEMT 2100 Construction Mgmt Fundamentals	3
CVEN 1025 Civil Engineering Graphics	3
CVEN 2214 and 2215 Surveying and Lab	2
MATH 2411 Calculus II	4
PHYS 2311 Physics I	4
PHYS 2321 Physics I Lab	1

Semester 3	CRS
CEMT 2300 Heavy Civil Construction & Equipment	3
Core Curriculum Course	3
ENGR 1130 Engineering Chemistry	5
ENGR 1100 Computational Foundations	3
Statistics Course	3

Semester 4	CRS
CEMT 3100 Field Engineering & Management	3
Core Curriculum Course	3
Engineering Science and Design	3
ENGL 2030 Core Composition II	3
Math or Science	3

Semester 5	CRS
ARCH 3330 Building Systems I	3
CEMT 3231 Construction Materials and Methods	3
Core Curriculum Course	3
Engineering Science and Design	3
Math or Science	3

Semester 6	CRS
ARCH 4440 Building Systems II	3
CEMT 4232 Construction Planning and Controls	3
Core Curriculum Course	3
Engineering Science and Design	3
Math or Science	3

Semester 7	CRS
Technical Elective	3
CEMT 4236 Project Management	3
CEMT 4240 Building Information Modeling	3
CEMT 4242 Construction Safety	3
CEMT 4939 Internship	1
Engineering Science and Design	3

Semester 8	CRS
CEMT 4067 Senior Capstone	3
CEMT 4233 Construction Cost Estimating	3
CEMT 4234 Sustainable Construction	3
Core Curriculum Course	3
Engineering Science and Design	3