

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. The majority of students earning the B.S. in CEM will be eligible to take the Fundamental of Engineering 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 are responsible for meeting with the faculty advisor in their department to confirm major requirements. Students completing the Civil Engineering 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, or BANA 2010
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	
Required Engineering Coursework	46	
CEMT 1000 Introduction to Construction Management	1	
CEMT 2100 Construction Mgmt Fundamentals	3	
CEMT 2300 Construction Equipment & Heavy Civil	3	
CEMT 3100 Field Engineering & Management	3	
CEMT 4067 Senior Capstone Project	3	

CEMT 4231 Construction Materials and Methods	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	At least 3 months of internship
CVEN 1025 or MECH 1025 Engineering Graphics	3	
CVEN 2212 Engineering Surveying	2	
ENGR 1200 Freshman Design	3	
ENGR 1100 Computational Foundations	3	
Engineering Science and Design coursework	15	Select Civil, Computer Science, Electrical, or Mechanical
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.**

Year One	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 Freshman Design	3
	MATH 1401 Calculus I	4

Semester 2	CRS
CEMT 2100 Const Mgmt Fundamentals	3
CVEN 1025 or MECH 1025 Engineering Graphics	3
CVEN 2212 Surveying for Construction	2
MATH 2411 Calculus II	4
PHYS 2311 Physics I	4
PHYS 2321 Physics I Lab	1

Year Two	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

Year Three	Semester 5	CRS
	ARCH 3330 Building Systems I	3
	CEMT 4231 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

Year Four	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 Project	3
CEMT 4233 Construction Cost Estimating	3
CEMT 4234 Sustainable Construction	3
Core Curriculum Course	3
Engineering Science and Design	3