

# Professional Master's Degree **Architectural Engineering**

**Be game-changing. Be inventive. Be successful.**



Civil, Environmental and  
Architectural Engineering

UNIVERSITY OF COLORADO BOULDER

# Grow your expertise. Advance your career.

CU Boulder's professional Master of Science degree in architectural engineering provides students with the confidence and capability to understand and solve complex problems in the natural and built environment.

Our architectural engineering professional MS program focuses on three disciplinary areas: building systems engineering (BSE), intelligent building systems (IBS) as well as construction engineering and management (CEM). The program curriculum includes three required core courses plus a set of elective courses that can be selected from the disciplinary areas.

In the BSE subplan, students take elective courses related to designing and operating sustainable building systems. In particular, students will learn to design and evaluate integrated energy systems, including construction materials, heating, cooling, lighting, electrical and power generation systems for the built environment.

In the IBS subplan, students take courses related to information and operational technologies (IT and OT) for intelligent building systems focusing on the three pillars of buildings systems engineering and operations, data science, and information technology architecture and cybersecurity for the application of Building Internet of Things (BioT) technologies.

In the CEM subplan, students have the opportunity to select among a wide range of elective courses to tailor their education to the needs of their career goals as engineers in project development, construction, design-build and owner organizations. The CEM program prepares students for the analytical, multicultural and creative demands of the construction industry.

As a dedicated graduate program in architectural engineering, we position students to enter the industry with the significant advantage of quality higher education and exposure to real-world problems through experimentation, testing and analysis.

Join our professional Master of Science program in architectural engineering to gain the skills to help promote a sustainable built environment - from materials, to buildings, to campuses, to urban development - and enhance the global quality of life.

## Admission

### Requirements

- ▶ Bachelor's degree in engineering or equivalent
- ▶ Minimum undergraduate GPA of 3.0
- ▶ Undergraduate prerequisite courses in: Calculus I, II, III, and differential equations; two semesters of calculus-based physics; statistics (analytical mechanics); thermodynamics; and fluid mechanics

### Completion

- ▶ MS is 30 credit hours

### Core courses

- ▶ AREN 5830: Building Energy Systems
- ▶ CVEN 5836: Construction Engineering and Management Fundamentals
- ▶ AREN 5890: Sustainable Building Design

### Subplans

- ▶ Building systems engineering
- ▶ Intelligent building systems
- ▶ Construction engineering and management



# Graduate education that works the way you do.

**Real flexibility.** Your course schedule can be broad or niche, depending on your career goals.

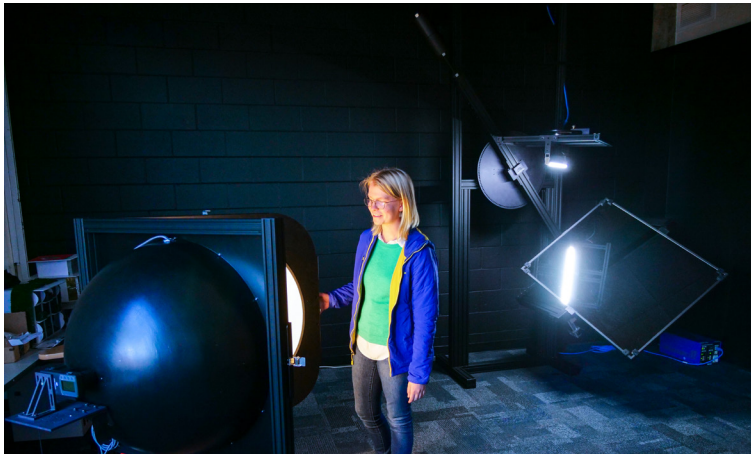
**Real peers.** You'll be a part of a rich community of students and have the opportunity to work closely with your peers to find team-based solutions.

**Real professionals.** Our faculty are world-renowned scholars and engineers who can give you the guidance and hands-on experience that will help you succeed in this growing field.

**Real options.** Our students have the opportunity to gain specialized knowledge in three of four program tracks.

**Real value.** The first Engineers Without Borders—USA chapter started here at CU Boulder.

**Real opportunity.** We have more than 50 years of collaboration with federal research labs and industry partners.





# Value to you.

**Competitive.** CU Boulder is one of only three programs in the United States offering graduate degrees in architectural engineering.

**Compelling.** Receive a respected degree from our Tier 1 research university.

**Comprehensive.** Students gain foundational knowledge as well as exposure to real-world problems through experimentation, testing and analysis.

**Collaborative.** Students have the opportunity to work alongside faculty conducting diverse research projects.

## Get started

**VISIT:** [colorado.edu/ceae](http://colorado.edu/ceae) **CALL:** 303-492-6331 **EMAIL:** [cugrad@colorado.edu](mailto:cugrad@colorado.edu)



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