# INTEGRATED CONSTRUCTION, MANAGEMENT + LEADERSHIP GRADUATE CERTIFICATE

#### **Business School:**

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#### **College of Architecture and Planning:**

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### Introduction

The College of Architecture and Planning, the College of Engineering, Design and Computing, and the Business School at the University of Colorado Denver have formed a partnership to create an innovative and interdisciplinary leadership program. The Integrated Construction, Management and Leadership (ICML) Certificate is a four-course certificate designed to launch designers, architects, engineers, and business entrepreneurs into the world of construction or rapidly update an existing skill-set.

As disciplinary identities, project boundaries, and conventional markets blur, leadership, management skills, and civic mindfulness are key aspects to successfully navigating a rapidly transforming 21st century built environment. Many new ideas are emerging around how projects are conceived and delivered that better integrate the complex relationships among finance, marketing, design, and construction. These new interdisciplinary management and construction techniques streamline the construction of increasingly large-scale and complex projects. Leadership skills are necessary for success in the central activities of contemporary engineering, architectural design firms, business, government, and non-profits. The demands of project management in firms today involve more than specific technical expertise in a given field. Firms need creative individuals who can effectively innovate, execute, and communicate across disciplines. This certificate program capitalizes on these changes and the new opportunities they present.

ICML is an interdisciplinary program designed for working or aspiring professionals, and upper-level students interested in expanding their knowledge base in the fields of engineering, architecture, business, and their intersections. The courses include introductions to and explorations of current trends in the construction industry, project management and building information modeling (BIM). The final course is an integrated course that brings together top executives in the architecture, engineering and construction (AEC) business to discuss current industry topics and provides students an opportunity to apply principles from the various fields to case study projects.

 Students can earn graduate-level credit for each course they successfully complete. If students have an undergraduate degree, they can earn the ICML Certificate upon completion of all four courses.

- They can take the courses as a non-degree student or while enrolled in a degree program at the University of Colorado Denver.
- The courses can be used to partially fulfill requirements for the MEng in Construction Engineering and Management or other eligible graduate programs such as the Master of Architecture degree upon acceptance into these programs.
- Approved courses in this Certificate may also count toward related Certificates offered by the Business School and Construction Engineering and Management.

## **Certificate Requirements**

Code	Title	Hours
ARCH 6475	BIM/Flow of Information	3
BANA 6650	Project Management	3
or CEMT 5237	Advanced Project Management	
CEMT 5235	Advanced Construction Engineering	3
ARCH 6413	Construction Leadership	3
or CEMT 5238	Integrated Construction Leadership	
Total Hours		12

**Note:** A grade of B- or higher is required in all courses applied toward the certificate.