M.S. IN CONSTRUCTION MANAGEMENT (ONLINE)

Overview

The University of Miami's MS in Construction Management Online Program is a practice-oriented advanced graduate degree path that offer a blend of construction and business management courses. This online offering is designed to develop leaders and managers for complex building and infrastructure projects, with mastery in best practices related to resiliency, sustainability, building information modeling, project delivery, and decision-making. The University is uniquely situated in a booming metropolis where commercial and residential construction is a large and important industry.

Furthermore, the proposed Online Certificate programs embedded within the MS in Construction Management Degree, can be pursued independently and as part of **"stackable certificates"** leading to customizable MS Degree paths in collaboration with other academic units which may be offering related Graduate Certificate programs.

The MS in Construction Management Online Program directly aligns with and advances several key strategic priorities of the University of Miami, positioning the institution at the forefront of a critical industry.

1. Focus on Interdisciplinary Excellence: The University's mission emphasizes integrated and interdisciplinary research to develop "actionable solutions" to complex problems. By offering a curriculum that combines engineering, architecture, business, law, and other courses, this program embodies this principle. It bridges traditional silos to address a real-world need—developing leaders for complex building projects—that requires expertise from multiple disciplines. The program also aligns with the University's focus on resiliency, sustainability, and innovative project delivery.

2. Leveraging Geographic Location: Located in a major urban center and a global hub for business and environmental concerns, the University of Miami is uniquely positioned to lead in the field of construction management. The program capitalizes on this unique context by focusing on challenges directly affecting South Florida and other communities worldwide, such as building information modeling (BIM) and sustainable construction.

3. Innovative Education and Research: The University aims to "transform lives through education, research, innovation, and service." Offering this program in an online format demonstrates a commitment to educational innovation and expanding access to working professionals and students globally. The curriculum's focus on best practices in resiliency, sustainability, and project delivery directly supports the University's research goals in these areas.

4. Community and Global Service: The program's core purpose—to develop leaders and managers to apply their skills in managing complex construction projects—is a direct expression of the university's commitment to providing "service to our community and beyond." By producing graduates who can apply their knowledge to build a more resilient and sustainable world, the program fulfills a vital part of the institution's academic and social mission.

Admission Requirements

To be eligible for admission, a student must hold a bachelor's degree from a regionally accredited institution in engineering, architecture, environmental / physical sciences, environmental science and policy, business, management, economics, or construction management. Other admission requirements will be consistent with those of UM Graduate School; GRE / GMAT are not required.

Curriculum Requirements

Code	Title	Credit Hours
CORE COURSES (18 credits)		
Core 1 Construction Management Principles:		
Choose one of these options:		
CAE 762	Construction Project Management	3
or ISE 763	Project Management Techniques	
Core 2 BIM and Construction Documents: [1]		
CAE 661	Computer Aided Architecture Engineering Design	3
Core 3 Construction Economics: [1]		
CAE 765	Construction Accounting and Finance	3
Core 4 Contracting and Risk Management: [1]		
CMA 636	Legal Issues in Building Construction	3
Core 5 Sustainable Construction: [1]		
Choose one of these options:		
CAE 660	Sustainable Construction	3
or ARC 630	Building Technology: Materials and Methods	
Core 6 Professional Practice and Leadership:		

CAE 769	Construction Management Capstone Internship	3
ELECTIVES		**12**
Management:		
MGT 602	Human Resource Management	
MGT 603	Leading Teams	
MGT 604	Design Thinking	
Technical:		
ARC 656	Parametric Tectonics	
ARC 657	Design and Fabrication Techniques	
ARC 681	Special Problems	
BTE 621	Management of Digital Transformation	
CAE 665	Facilities Operation and Management	
CAE 691	Special Topics	
CAE 744	Risk Management and Resilience	
CAE 791	Advanced Topics in Construction Management	
CMA 630	Contract Documents	
CMA 670	Construction Site Practicum (Materials and Methods Health and Safety)	
CMA 671	Construction Management Practicum (Project Management)	
CMA 674	Capstone Project	
CMA 692	Construction Forensics	
CMA 701	Operating and Managing a Construction Organization	
CMA 708	Preconstruction Services	
CMA 720	Advanced Planning and Scheduling	
CMA 724	Human Resource Management	
CMA 730	Managing Legal Issues in Building Construction	
CMA 734	Prevention and Resolution of Contract Disputes	
CMA 740	Project Feasibility Analysis and Valuation	
ISE 612	Quality Management Systems	
ISE 670	Engineering Management	
ISE 671	Engineering Entrepreneurship	
ISE 761	Advanced Economics of Systems	
ISE 764	Supply Chain Management	
Total Credit Hours		**30**

[1] These courses make up the required Sustainable and Resilient Construction track.

[2] May be substituted as a Technical elective if not taken as a Global Awareness/Management elective.

MS Path through Certificates

Code	Title	Credit Hours
Certificate in Construction Management [1]		12
Certificate in Sustainable Construction [1]		12
Practicum 1		
CAE 769	Construction Management Capstone Internship	3
Practicum 2		
CMA 674	Capstone Project	3
Total Credit Hours		**30**

[1] Students in the certificate programs must take the specified electives in order to be able to complete the master's degree in 30 credit hours.

Sample Plan of Study: 1 Year Path

This is a just a sample of how a student might complete the program in one year. Consult with the program director to determine your individual plan of study.

Year One		
Fall		**Credit Hours**
CAE 661	Computer Aided Architecture Engineering Design	3
CAE 762	Construction Project Management	3
CAE 744	Risk Management and Resilience	3
CMA 701	Operating and Managing a Construction Organization	3
MGT 624	Negotiation Strategies	2
	Credit Hours	**14**
Spring		
CAE 660	Sustainable Construction	3
CAE 665	Facilities Operation and Management	3
CAE 765	Construction Accounting and Finance	3
CMA 636	Legal Issues in Building Construction	3
CMA 692	Construction Forensics	1
	Credit Hours	**13**
Summer		
CAE 769	Construction Management Capstone Internship	3
	Credit Hours	**3**
	Total Credit Hours	**30**

Sample Plan of Study: 1.5 Year Path

This is a just a sample of how a student might complete the program in one and a half years. Consult with the program director to determine your individual plan of study.

Year One		
Fall		**Credit Hours**
CAE 661	Computer Aided Architecture Engineering Design	3
CAE 762	Construction Project Management	3
CMA 701	Operating and Managing a Construction Organization	3
	Credit Hours	**9**
Spring		
CAE 660	Sustainable Construction	3
CAE 665	Facilities Operation and Management	3
CAE 765	Construction Accounting and Finance	3
CMA 636	Legal Issues in Building Construction	3
	Credit Hours	**12**
Summer		
CAE 769	Construction Management Capstone Internship	3
	Credit Hours	**3**
Year Two		
Fall		
ARC 681	Special Problems	1
CAE 744	Risk Management and Resilience	3
MGT 624	Negotiation Strategies	2
	Credit Hours	**6**
	Total Credit Hours	**30**

Mission

The vision of the MS CM Online Program is to provide an interdisciplinary, flexible and state--of-the-art curriculum that provides students with knowledge and marketable skills to become future leaders of construction related organizations worldwide, by utilizing existing infrastructure resources at University of Miami, with program-generated additional resources as necessary.

Goals

The primary goal of this Online Program would be to train graduates with a strong foundation in engineering, architecture, business, and other related disciplines. The program aims to produce professionals capable of leading and managing complex building projects with a mastery of best practices in resiliency, sustainability, building information modeling, project delivery, and decision-making. This would prepare students for professional careers in the construction industry and related fields, with an emphasis on solving complex problems and taking on upper-level management roles.

Student Learning Outcomes

- Students will develop technical professional proficiency
- Students will acquire financial knowledge
- Students will develop entrepreneurial skills