

CERTIFICATE IN SUSTAINABLE CONSTRUCTION (ONLINE)

Overview

Growth in the construction industry is projected to outpace all other industries through 2030, creating a high demand for qualified professionals in the industry. The Online Graduate Certificate in Sustainable Construction addresses the growing demand for professionals with the advanced knowledge, discipline, and skills needed to face the challenges of the construction industry and become future leaders of design and construction-related organizations worldwide. The certificate takes advantage of the culture and resources available at the School of Architecture as well as the Miami Herbert Business School and the School of Law. The Online Graduate Certificate in Sustainable Construction prepares students for effective management leadership in the construction field. It provides a foundation for training in professional management of construction projects while focusing on three components that represent the functional areas of sustainable construction:

- Management
- Project Controls
- Design and Construction Technology

Certificate requires a total of 12 credits of core courses and related electives.

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 (9 credits)		
Core 1 Sustainable Construction:		
CAE 660	Sustainable Construction	3
or ARC 630	Building Technology: Materials and Methods	
Core 2 Construction Economics:		
CAE 765	Construction Accounting and Finance	3
Core 3 Contracting and Risk Management:		
CMA 636	Legal Issues in Building Construction	3
ELECTIVES		3
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 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 671	Engineering Entrepreneurship	
ISE 670	Engineering Management	
ISE 761	Advanced Economics of Systems	
ISE 764	Supply Chain Management	
Total Credit Hours		12

¹ Students who want to apply this certificate towards the MS in Construction Management must take one of these courses to fulfill the elective requirement.

Mission

- To prepare students for professional leadership and lifelong learning in architecture, urbanism, and related fields.
- To preserve and develop knowledge for the profession through research and practice.
- To share knowledge locally and internationally through community service.
- To promote building and community design goals of environmental responsibility, social equity, and economic sustainability.

Learning Outcome

- Students will develop technical professional proficiency.
- Students will develop interdisciplinary system design and construction principles.