

# CONSTRUCTION MANAGEMENT (MS)

## Contacts

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Program Website (<https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/construction-management-ms.html>)

## Program Description

- **STEM** designated program

The MS in Construction Management program is designed to provide students with the knowledge and skills to plan and manage each phase of the construction process as applied to complex commercial, infrastructure, and residential building projects. The mission of the program is to offer a comprehensive construction and management education consistent with the mission of the University and the College of Architecture and the Built Environment to improve the quality and sustainability of the construction industry and thus the built environment.

Graduates will have the skills necessary to manage the construction process from project conception to closeout with respect to scope, schedule, budget, quality, risk and safety, and the environment. The Construction Management Core Curriculum stresses the following topics:

- Leadership, communication, problem solving, and business management skills
- Project Management from feasibility to commissioning and closeout
- Project life-cycle and sustainability
- Construction law, contract administration and regulatory compliance
- Types and behavior of construction materials and structures
- Project delivery methods
- The means and methods of construction
- Finance and accounting principles and procedures for construction
- Planning, scheduling, and methods of integrated project control
- Estimating, budgeting, purchasing, and cost control
- Safety, health, environmental and quality management of the construction process

## Learning Goals/Outcomes

- Evaluate relevant cost, schedule, quality, and safety data; formulate and defend management decisions based on sound analysis
- Lead and/or effectively contribute to the success of complex project management teams of stakeholders such as owners, design professionals, code officials, colleagues and subordinates
- Formulate policies and procedures that anticipate challenges faced by construction project management teams

- Identify and evaluate the ethical choices faced by construction management professionals and formulate policies that promote ethical choices
- Foster and contribute in collaboration across all disciplines of construction project stakeholders and appreciate the benefit of collaboration.

Areas of study include: project planning, estimating, scheduling, risk management, construction information modeling techniques and documentation, legal and contractual issues, project finance and cost control, and health and safety. Moreover, a key component of the program is the integration of techniques, materials and methods of sustainable building into the construction process. Future construction managers will be trained in the principles of sustainability and Leadership in Energy and Environmental Design (LEED) standards. By definition, construction management is a cross-disciplinary practice that synthesizes aspects from the fields of business, architecture, engineering and construction. This degree program provides a balance among various skill sets with emphasis upon practical application, thereby ensuring that a graduate has the necessary knowledge base to be simultaneously successful on a construction site and in an office setting.

## Curriculum: 2 Year, 36 Credits

Course	Title	Credits
<b>First Year</b>		
CMGT 600	Constructn Estimatr & Schedn	3
CMGT 602	Constructn Informatn Modeling	3
CMGT 603	Const Law: Roles & Responsibi	3
CMGT 604	Project Finance & Cost Control	3
CMGT 606	Construction Risk Management	3
SDN 601	Princ & Methods of Sust Design	3
<b>Credits</b>		<b>18</b>
<b>Second Year</b>		
CMGT 612	Ad Constr. Proj. Management	3
Designated Electives (CMGT 608 or any SDN)		3
CMGT 618	Heavy Const Principle&Practice	
Any SDN		
CMGT 614	Materials & Mthds of Construc	
Designated Elective (CMGT 614, CMGT 618, MRE 601 or any IMBA)		3
CMGT 618	Heavy Const Principle&Practice	
MRE 601	Sustain Real Estate Dev Proc	
CMGT 901	Master's Project	3
General Electives		6
<b>Credits</b>		<b>18</b>
<b>Total Credits</b>		<b>36</b>